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69 Danio rer
28 Human DNA
752 Genomic s
37 Homo sapi
01 Lotus cor
49 Sequence
29 Human DNA
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                                     Zebrafish
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Direct Submission
Direct Submission
Submitted (03-ANG-1995) M.R. Popoff, Institut Pasteur, 28 rue du
Dr. Roux, Toxi-ANG-1995) M.R. Popoff, Institut Pasteur, 28 rue du
Dr. Roux, Toxi-ANG-1995 M.R. Popoff, Institut Pasteur, 28 rue du
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Dr. Roux, Toxi-ANG-1995 M.R. Popoff, Institut 
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Characterization of Clostridium perfringens iota-toxin genes and
expression in Escherichia coli
Infect. Immun. 61 (12), 5147-5156 (1993)
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Clostridium perfringens
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Direct Submission
Submitted (30-APR-1993) M.R. Popoff, Institut Pasteur,
Dr. Roux, Toxines Microbiennes, 75015 Paris Cedex 15, F
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AR016831 Enterococ
AC123142 Rattus no
BV162185 RPAWWSEQO
AL139012 Human DNA
AL135936 Human DNA
AL155936 Human DNA
AL15563 Home sapi
BX530036 Zebrafish
AC095519 Rattus no
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db_xxef="d31:929032"
db_xxef="d0iprot/TremBL:046220"
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fbb_xxef="Uniprot/TremBL:046220"
db_xxef="Uniprot/TremBL:046220"
db_xxef="Uniprot/TremBL:046
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GIPIDESCVELIFDDNTSEIIKEQLKYLDDKKIYNVKLERGMNILIKVPSYFTNFDEY
NNFPASWSNIDTKNQDGLQSVANKLSGETKIIIPMSKLKPYKRYVFSGYSKDPSTSNS
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NSTPEILKEPEIKVPSDQEILDAHNKYYADIKLDTNTCHTYIDGIYFEPTQTNKEALD
YIQKYRVEATLQYSGFKDIGTKDKEIRNYLGDQNQPKTNYINFRSYFTSGENVMTYKK
                                                                                                                                                                                                                                            NELKETIQDKLFKQDGFKDVSLYEPGNGDEKPTPLLIHLKLPKNTGMLPYINSNDVKT
LIEQDYSIKIDKIVRIVIEGKQYIKAEASIVNSLDFKDDVSKGDLWGKENYSDWSNKL
                                                                                                                                                                                                                                                                                                                                            YRRSGPQEFGLTLTSPEYDFNKIENIDAFKEKWEGKVITYPNFISTSIGSVNMSAFAK
RKIILRINIPKDSPGAYLSAIPGYAGEYEVLLNHGSKFKINKVDSYKDGTVTKLILDA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             /db_xref="GOA:Q46221"
/db_xref="UniProt\TrEMBL:Q46221"
/translation="MNIQIRMVFSFLTLTAMISQTLSYNVYAQTTTQNDTNQKBEITN
ENTISSNGLMGYYFADBHFKDJBLMAPIRNGDLKFBEKKVDKLLTBDNSSIKSIRWTG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         RIIPSEDGEYILSTDRNDVLMQINAKGDIAKTLKVNMKKGQAYNIRIEIQDKNLGSID
NLSVPKLYWELNGNKTVIPEENLFFRDYSKIDENDPFIPNNNFFDVRFFSAAWEDEDL
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  BCT 23-NOV-1997
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Pred. No. 5.6e-05;
0; Mismatches 14; Indels 0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Sb component; sbs gene; toxin.
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        toxin component Ia"
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(rzans] table=11
froducE="iota toxin component Ib"
protein_id="CAA51960.1"
db_xref="GI:414655"
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gene="lb"
5505. .5496
product="iota toxin component lb"
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Sa component; sas gene; Sb compon
Clostridium spiroforme
Clostridium spiroforme
Bacteria; Firmicutes; Mollicutes.
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Best Local Similarity 79.7%;
Matches 55; Conservative (
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|gene="Ib"
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mat_peptide
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NDVSTLIEQGYSÍKIDKIVRIVLEGKQYIKAEASVVSCLDFKDDVSKGDSWGKANYSD
SKRÍKSSDELAGVNDÝMGRYTAINNYLIANGFYNBYNAELDAKINNI BALKKEBIP
ANLVYYRRSGEPGELTLSSPEYDFKVENIDAFKEKWEGYTLSYPRFVSTSIGSVNM
SAFAKRIVLRISIPKNSFGAYLSAIPGYAGEYEVLLNHGSKFKISKIDSYKDGTTTK
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TDANTAGVAINIAYQNGFTGSITTNYSHTTENSTAVQNSNGESWNTSLSINKGESAYI
NUNNRYYTTGTAPMYKYTPTTNLVLDGDTLTTIKAQDNQIGNNLSPNETYPKKGLSPL
ALNTMDQFSSKLIPINYDQLKKLDAGKQIKLETTQVSGNYGIKNSQQQIITEGNSWSD
YISQLDSLSASIILDTGSDVPERRYTAKDSSNPEDKTPVLITGBAIBKAFGATKNGEL
LYFNGMPIDESCVELIFDGNTANLIKERLNALNDKKIYNVQLERGMKILIKTSTYFNN
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TELMSTPETILKEPDIKVPSPOEIIDAHKKYYADLSFNQSTANYYLDGLYFEPYQTNK
EVLDYIQKYKVEATLESYSGFKDIGTKDKELRNYTGDSNQPKTNYVNFRSYFTSGENVM
PYKKLRIYAITPENKELLVLSIN"
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SLERFNEFKATI QDKLFKQDGFKD I SLYEPGNGDKKSTPLLIHLKL PKDTGMLPYSNS
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SSPKLYWELNGDKTLIPEKNLFLRDYSKIDENDPFIPKDNFFDLKLKSRSARLASGWG
DEDLDTDNDNIPDAYEKNGYTIKDSIAVKWEDSFAQQGYKKYLSSYLESNTAGDPYTD
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NYSAIERPEDFLKDKEKAKDWERKEAERIEKOLLEKSEREALESYKKDAVEISKYSQVR
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TVSSNGLMGYYFADEHFKDLELMAPVRNGELKFEKNKVEKLLTEEKTNIKSIRWTGRI
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Gibert, M., Perelle, S., Daube, G. and Popoff, M.R. Clostridium spiroforme toxin genes are related to C. perfringens clost toxin genes but have a different genomic localization Syst. Appl. Microbiol. 20, 337-347 (1997)
                                                                                                                                                                                                                                                                      Submitted (17-MAY-1996) M.R. Popoff, Institut Pasteur, Unite d
Enterobacteries, 28 rue du Docteur Roux, 75724 Paris Cedex 15,
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/db_xref="GOA:006499"
/db_xref="UniProt/TrEMBL:006498"

    .4465
    /organism="Clostridium spiroforme"

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/db_xref="G1:2117114"
/db_xref="G03:006497"
/db_xref="UniProt/TrEMBL:006497"
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Pred. No. 0.089;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      /mol_type="genomic DNA"
/strain="CS246"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            db_xref="taxon:29348"
                                                                                                                                                                                                                                                                                                                                                                                    Location/Qualifiers
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CLOCDTAB
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/productor cuch
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/db_xref="d1:8926247"
/db_xref="d1:8926247"
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/cutytyapterpedficktaneskeresperieseresperieser
/cutytyapterpedficktanesperieseresperieseresperiesere
/ythynyctileggysfridktyridgerpilisheresperieseresperiesere
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                                                                                           2790 GATGCAAATACAGCTGGAGTAGCAATTAATATTGCATATCAAAATGGATTTACTGGCAGT 2849
                                                                                                                                                                                                                                                                                                                                                                                           AF271719 4075 bp DNA linear BCT 22-FEB-2002
Clostridium difficile CdtA (cdtA) and CdtB (cdtB) genes, complete
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Clostridium difficile
Bacteria; Pirmicutes; Clostridia; Clostridiales; Clostridiaceae;
Clostridium.
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'note="enzymatic domain; ADP-ribosylating binary toxin
                                                        GATGCTAATACTGTAGGAGTTTCAATTTCAGCAGGGTATCAGAACGGCTTTACTGGTAAT
   0; Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 note="binding domain; ADP-ribosylating binary toxin
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Song, K.P. and Chang, S.Y.
Direct Submission
Submitted (24-MAY-2000) Microbiology, National University of Singapore, 5 Science Drive 2 117597, Singapore
Location/Qualifiers
20; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              /organism="Clostridium difficile"
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DNA Seq. 12 (2), 115-120 (2001)
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Chang, S.Y. and Song, K.P.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          product="CdtA"
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/gene="cdtB"
1445. .4075
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'gene="cdtB"
49; Conservative
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ORGANISM
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DEFINITION
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PUBMED
REFERENCE
AUTHORS
TITLE
JOURNAL
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TITLE
Matches
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KEYWORDS
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AF271719
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TGRIIPSKOGETTLSTDRDDVLMQVNTESTISNTLKVNMKKGKEYKVRIELQDKNLGS
IDNISSBNLYWELDCHKKIIPERDLELLDSYBRIEKDDPPIDNNNFEPDRLLAGDRENDE
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LDTDNDNIPDSYBRNYTHICDLIAKWEDSFARGGYKKYVSKYLESNTRGDPFYTDYEK
ASGSFDKAIKTEARDPLVAAYPIVGVGMEKLIISTNEHASTDGGKTVSRATTNSKTES
NTAGVSKVNGYQNGGFTANTYTKOLIAKSHTTDNSTRVQDSMEGSBWTGLEIKKGESAYINAN
VRYNTGTAPMYKYTPTTNLVLDGDTLSTIKAQENQIGNNLSEGDTYBKGLSPLALN
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NDIPIDESCVELIFDDNTANKIKDSLKTLSDKKIYNVKLERGMYILLIKTPTYFNYEDD
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SIIVKIRAKERKTDYLVPBGGYTKSSYEPFTTEKDSSNIEITLGSGGTTYLDNLSITE
LNSTPRILDEPEVKIFTDDNIIDAHKIYFRADLNRPSTGNTYINGMYFRADL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                CLOCDTAB
Clostridium difficile ADP-ribosyltransferase enzymatic and binding component (cdtA and cdtB) genes, complete cds's.
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/tb_xref="G1:2340081"
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CNTTYKAPIESFLKOKEKAKEWBEKEDERIEQKLERSEKEALESYKKOSVEISKYSQT
RNYFYDYQIEANSREKEYKELRNAISKNKIDKPMYVYYFESPEKFAFNKVIRTENQNE
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Clostridium difficile
Clostridium difficile
Bacteria; Firmicutes; Clostridia, Clostridiales, Clostridiaceae,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          1 (bases 1 to 4277)
Perelle, S., Gibert, M., Bourlioux, P., Corthier, G. and Popoff, M.R. Production of a complete binary toxin (actin-specific ADP-ribosyltransferase) by Clostridium difficile CD196
Infect. Immun. 65 (4), 1402-1407 (1997)
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Original source text: Clostridium difficile (strain CD196) DNA.
Location/Qualifiers
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   1 GATGCTAATACTGTAGGAGTTTCAATTTCAGCAGGGTATCAGAACGGCTTTACTGGTAAT
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       DB 1; Length 4075;
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Pred. No. 1;
0; Mismatches 22; Indels
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  organism="Clostridium difficile"
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Query Match
Best Local Similarity 68.1%;
Matches 47; Conservative (
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2501 GTAACTACA 2509
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Gaps

61

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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Tobases 1 to 57660)

Paulsen, I., Banerjel, L., Myers, G., Nelson, K., Seshadri, R., Read, T., Fouts, D., Elsen, J., Gill, S., Heidelberg, J., Tettelin, H., Dodson, R., Umayam, L., Brinkac, L., Benaan, M., Daugherty, S., DeBoy, R., Durkin, A., Kolonay, J., Madupu, R., Nelson, W., Vamathevan, J., Tran, B., Upton, J., Hansen, T., Shetry, J., Khouri, H., Utterback, T., Radune, D., Ketchum, K., Dougherty, B. and Fraser, C. Birect Submission
Submitted (03-FEB-2003) The Institute for Genomic Research, 9712
Medical Center Dr, Rockville, MD 20850, USA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   l (bases I to 57660)
Paulsen, I., Banerjei, L., Myers, G., Nelson, K., Seshadri, R., Read, T., Peuts, J., Elsen, J., Gill, S., Heidelberg, J., Tettelin, H., Dodson, R., Umayam, L., Brinkac, L., Beanan, M., Daugherty, S., DeBoy, R., Durkin, A., Kolonay, J., Maduph, R., Nelson, W., Vamathevan, J., Tran, B., Upton, J., Hansen, T., Shetty, J., Khouri, H., Utterback, T., Radune, D., Ketchum, K., Dougherty, B. and Fraser, C.
Role of Mobile DNA in the Evolution of Vancomycin-Resistant Enterococcus faecalis
Science 299 (5615), 2071-2074 (2003)
                                                                                                                                                                                                                                                                                                                                    AE016831 57660 bp DNA circular BCT 28-MAR-2003
Enterococcus faecalis V583 plasmid pTEF2, complete sequence.
                                                                                             475 AIGCGGCTICIACAGGAATAATATTICATCAGAGACAGTGAACGCATTTACTGTTAATA 416
                                                  2 ATGCTAATACTGTAGGAGTTTCAATTTCAGCAGGGTATCAGAACGGCTTTACTGGTAATA
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/Tour tag="EFB0001"
/note="similar to GP:1041114; identified by sequence
similarity; putative"
/transl_table=11
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Enterococcus faecalis V583
Bacteria, Firmicutes, Lactobacillales, Enterococcaceae,
23; Indels
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0; Mismatches
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100. .1110
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1280. .2437
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/gene="traB-2"
  45; Conservative
                                                                                                                                                                                                      TACCTAAA 408
                                                                                                                                                      62 TCACTACA 69
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Enterococcus.
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SOURCE
ORGANISM
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                                                                                                                                                                                                                                                                                    RESULT 6
AE016831/c
                                                                                                                                                                                                                                                                                                                                    LOCUS
DEFINITION
ACCESSION
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JOURNAL
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REFERENCE
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  Matches
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TERII IPSKOGSTYLSTDRDDVLMQVYNESTIGSTYLKVUMKKGYERYKVRILLDKUKSSIRWIGS
IDNLSSPINLYWELDGGSTYLSTDRDDVLMQVYNESTIGSTYLKVUMKKGYERYKVRILELQDKUNLGS
IDNLSSPINLYWELDGGSTYLKDLIAVKWEDSFAEGGYKKYVSNYLESDPALMSDWEDEL
LDTDNDNIPDSYERNGYTIKDLIAVKWEDSFAEGGYKKYVSNYLESDPALMSDWEDEL
ASGSFBPKALTYTRYRAPITYLAVKWEDSFAEGGYKKYVSNYLESDRYAGDPYDYEK
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VRYYNTGTAPMYKVTPTTNLVLDGDTLSTIKAQENQIGNNLSPGDTYPKKGLSPLALN
THOGFSSKILTIDTNSGYKKACHAGNGYLLETTQVSGNFGTWSSGQITTAGGNSRGNIEN
THOGFSSKILTIDTNSGYRENTAKNLODPENTPELTIGRALEGGNSRDIS
OLDSISSAILLDTRESSYERRYTAKNLODPENTPELTIGRALEGGNSRDIS
OLDSISSAILLDTRESSYERRYTAKNLODPENTPELTIGRALEGGNSRDIS
OLDSISSAILLDTRESSYERRYTAKNLODPENTPELTIGRALEKAGNSKOLLYF
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       SIIVKIKAKEEKTDYLVPEQGYTKFSYEFETTEKDSSNIEITLIGSGTTYLDNLSITE
LNSTPBILIDEBEWKIPTDQEIMDAHKIYFADLANNPESTGNTYINGMYFAFTQTNKRAL.
DYIQYXNVBATLQYSGFKDIGTKDKEMRNYLGDPNQPKTNYVNLRSYFTGGENIMTYK
KLRIYAITPDDRELLYLSVD"
                                                     DWSNKLTPNELADVNDYMRGGYTAINNYLISNGPVNNPNPELDSKITNIENALKREPI
                                                                           PTNLTVYRRSGPQEFGLTLTSPEYDFNKLENIDAFKSKWEGQALSYPNFISTSIGSVN
MSAFAKRKIVLRITIPKGSPGAYLSAIPGYAGEYEVLLNHGSKFKINKIDSYKDGTIT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  YNNYPSTWSNVNTTNQDGLQGSANKLNGETKIKIPMSELKPYKRYVFSGYSKDPLTSN
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 2536 GAATCTAATACAGCTGTGTGTGTTAATGTAGGATATCAAAATGGATTCACAGCTAAT 2595
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        PAT 18-DEC-2003
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           translation="MKIQMRNKKVLSFLTLTAIVSQALVYPVYAQTSTSNHSNKKKEI
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   9
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Doucette-Stamm, L.A. and Bush, D.
Nucleic acid and amino acid sequences relating to Enterococcus faecalis for diagnostics and therapeutics
Patent: US 6617156-A 1231 09-SEP-2003;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   1 GATGCTAATACTGTAGGAGTTTCAATTTCAGCAGGGTATCAGAACGGCTTTACTGGTAAT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Gaps
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   ch 49.0%; Score 33.8; DB 1; Length 4277; I Similarity 68.1%; Pred. No. 1; 47; Conservative 0; Mismatches 22; Indels 0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Score 31.2; DB 6; Length 807; Pred. No. 9.1;
                                                                                                                                                                                                                                                                                                                                       note="binding component; putative"
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| db_xref="GI:2340082"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Sequence 1231 from patent US 6617156.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             /organism="unknown"
/wol_type="genomic DNA"
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                                                                                                                                                                                                                                                              note="putative"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                AR395216.1 GI:40123610
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                                                                                                                                                      1528. .4170
/gene="cdtB"
                                                                                                                                                                                                         528. .1532
gene="cdtB"
                                                                                                                                                                                                                                                                                       540. .4170
gene="cdtB"
                                                                                                                                KLIVDATLIP"
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2596 GTAACTACA 2604
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Unclassified.
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Query Match
Best Local Similarity
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DEFINITION
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KEYWORDS
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AR395216/c
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AUTHORS
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gene

CDS

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//transL_table=11
//transL_table=11
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/translation="wkKIA5757
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      /db_xref="G1:29345353"
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/INPVSFETEQDMERFFRQVKLIYFDGKVVGYRGCSELPLKLECRAFKROVVRRQROLLN
APFNYKVFERNEFREWCKOMSSYK"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  sequence similarity; putative"
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  /locus tag="EFB0008"
/note="100% identity to the hypothetical protein prgT on
the Enterococcus faecalis plasmid pCF10 (PMID:1938961);
similar to GB:M90360, and PID:184435; identified by
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     2 ATGCTAATACTGTAGGAGTTTCAATTTCAGCAGGGTATCAGAACGGCTTTACTGGTAATA 61
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                and PID:184435; identified
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/loote="similar to GB:Z11692, GB:M19997, GB:X51466,
SP:P131339, PID:181969, PID:31106, PID:31108, GB:Z11692,
GB:M19997, GB:X51466, SP:P13639, PID:181969, PID:31106,
and PID:31108; identified by sequence similarity;
                                                                                                                                                                                                                                      /locus_tag="EFB0007"
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GB:D38524, SP:P49902, and PID:633071; identified by
sequence similarity; putative"
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db xref="GI:29345355"
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         ö
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             /locus tag="EFB0009"
/note="similar to GB:M90360, and
by sequence similarity; putative"
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Pred. No. 20;
0; Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                protein_id="AA083098.1"
                                                                                                                                                      /locus_tag="EFB0007"
8822. .6202
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           /locus tag="EFB0008"
6776. .6964
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6968. .7081
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1092. .9767
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                                                                                                                                                                                                                                                                                                                                                                                                          /codon_start=1
/transl_table=:
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Best Local Similarity 64.7
Matches 44; Conservative
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                                                                                                                                                                                                                                                                                                                                           /produce_pheronone shutdown protein TraB"
/produce_pheronone shutdown protein TraB"
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        /translation="MLLVFASCGVNKSTEDSKKTNETKVEQIATLSAGTPVQSLDPAT
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DFIRELSATTMFLEVNQRNKKSITSNKHARQAINFAIDREAISNKILTNGSIPAKGVV
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GEYLQNELQDTLDGLKVSVTAVPATLQTERLNSGNFMIALSGWQADFADPVSFLANFE
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             /note="similar to GB:X15414, GB:J04795, GB:M34720, SP:P15121, PID:178485, PID:178487, PID:178489, PID:178491, PID:179036, PID:179038, PID:2228538, and PID:28647; identified by sequence similarity; putative"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            DIVRKVPSFILDGTINLEMIYLKHENPLKKRNMEBYLKAVNIVNLFSQLGENDTYKE
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PID:561658, and PID:634053, identified by sequence
similarity; putative"
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protein id="AAO83096.1"
/db xref="GI:29345351"
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 /transl_table=11
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complement (4101. .5042)
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transl_table=11
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SOURCE

REFERENCE AUTHORS

ACCESSION VERSION KEYWORDS

DEFINITION

RESULT 7 AC123142

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Daylor traza, nousecon, 18 7030, USA

Statement Sequencing Consortium.

Direct Submission

Noise Submission

Submitted (13-MY-2003) Human Genome Sequencing Center, Department of Molecular and Human Genetics, Baylor College of Medicine, One Baylor Plaza, Houston, TX 77030, USA

On May 13, 2003 this sequence version replaced gi:24942321.

The sequence in this assembly is a combination of BAC based reads and whole genome shotgun sequencing reads assembled using Atlas (http://www.hgsc.bom.lwo.edu/projects/rat/). Each contig described in the feature table below represents a scaffold in the Atlas assembly (a 'contig-scaffold'). Within each contig-scaffold, individual sequence contigs are ordered and oriented, and separated by sized gaps filled with Ns to the estimated size. The sequence may extend beyond the ends of the clone and there may be sequence contigs within a contig-scaffold that consist entirely of whole genome shotgun sequence reads. Both end sequences and whole genome shotgun sequence reads. Both end sequences and whole genome table.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       NOTE: Estimated insert size may differ from sequence length (see http://www.hgsc.bcm.tmc.edu/docs/Genbank_draft_data.html).
NOTE: This is a 'working draft' sequence. It currently consists of 5 contigs. The true order of the pieces is not known and their order in this sequence record is arbitrary. Gaps between the contigs are represented as runs of N, but the exact sizes of the gaps are unknown. This record will be updated with the finished sequence as soon as it is available and the accession number will be preserved.
                                                                                   Submitted (29-MAY-2002) Human Genome Sequencing Center, Department of Molecular and Human Genetics, Baylor College of Medicine, One Baylor Plaza, Houston, IX 77030, USA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Assembly program: Atlas 3.0;
Consensus quality: 195444 bases at least Q40
Consensus quality: 200343 bases at least Q30
Consensus quality: 201534 bases at least Q20
Estimated insert size: 208489; sum-of-contigs estimation
Quality coverage: 5x in Q20 bases; sum-of-contigs estimation
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Web site: http://www.hgsc.bcm.tmc.edu/
Contact: hgsc-help@bcm.tmc.edu
------ Project Information
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| /db_xref="taxon:10116"
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Center clone name: CH230-144K23
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121267. .123348
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                                Worley, K.C.
Direct Submission
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168956
222561
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109165
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                                                                                                                                                                                                                                                                                                                                                                          COMMENT
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Ra Muzny, D. Marie., Matshrooks, S., Anin, A., Anguiano, D., Anyale, M., Anguiano, D., Anyagi, A., Anguiano, D., Anyagi, A., Anguiano, D., Anyagi, A., Anguiano, D., Bandaranake, D., Barber M., Baca, B., Baden, H., Balden, C., Bandaranake, D., Barber M., Barnstead, M., Benahmed, F., Biswalo, K., Blank, C., Burch, P., Burrell, K., Calderon, E., Cardenos, E., Cardenos, E., Cardenos, C., Cercel, R., Canton, E., Chen, Z., Chen, Y., Canteron, E., Cardenos, V., Carter, K., Cavazos, I., Dani, H., Dava, R., Canteron, D., Daramo, C., Ding, Y., Dunh, I., Diva, K., Davalia, M., Davas, S., Pinle, M., Canteron, D., Perser, C., Ding, Y., Panle, C., Perser, C., Panle, C., Perser, C
Rattus norvegicus clone CH230-144K23, *** SEQUENCING IN PROGRESS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Eukaryota, Metazoa, Chordata, Craniata, Vertebrata, Euteleostomi,
Mammalia, Eutheria, Rodentia, Sciurognathi, Muridae, Murinae;
                                                                                                                                                                                                                                                                                                                                                                                                                                    AC123142.5 GI:30579048
HTG; HTGS_PHASE1; HTGS_DRAFT; HTGS_ENRICHED.
Rattus norvegicus (Norway rat)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           (bases 1 to 224280)
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                                                                                                                                                          56759 TACCCAAA 56752
                                                                                             62 TCACTACA 69
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Rattus.
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Length 224280;

TITLE JOURNAL

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Submitted (06-007-2001) Sanger Centre, Hinxton, Cambridgeshire, Calo 1SA, UK. E-mail enquiries: humquery@sanger.ac.uk Clone requests: clonerques@sanger.ac.uk
On Oct 9, 2001 this sequence version replaced gi:15858875.
During sequence assembly data is compared from overlapping clones. Where differences are found these are annotated as variations together with a note of the overlapping clone name. Note that the variation annotation may not be found in the sequence submission corresponding to the overlapping clone, as we submit sequences with only a small overlap as described above. This sequence was finished as follows unless otherwise noted: all regions were either double-stranded or sequenced with an alternate chemistry or covered by high quality data (i.e., phred quality) as compressions and repeats; all regions were covered by at least one plasmid subclone or more than one M13 subclone; and the assembly was confirmed by resolve all sequencing problems, such abbreviations are used to associate primary accession numbers given in the feature table with their source databases: Em:, EMBL; Sw:, SWISSROCT; Tr:, TREMBL; Wp:, MORMPEP; Information on the WORMPEP that of the content of the content
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         http://www.anger.ac.uk/Projects/C_elegans/wormpep This sequence http://www.anger.ac.uk/Projects/C_elegans/wormpep This sequence was generated from part of bacterial clone contigs of human chromosome 1, constructed by the Sanger Centre Chromosome 1 Mapping Group. Further information can be found at http://www.sanger.ac.uk/HGP/Chr1 RPS-1091G18 is from the library RPCI-S constructed by the group of Pieter de Jong. For further details see http://www.chori.org/bacpac/home.htm WCTOR: porPACZ IMPORTANT: This sequence is not the entire insert of clone RPS-1091G18 it may be shorter because we sequence overlapping sections only once, except for a short overlap. The true left end of clone RPS-936N10 is at 41552 in this sequence. The true right end of clone RPS-936N10 is at 2000 in this sequence.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    23397 IGATACTATICTAGGAACCACAGATITAGCAGIGAATAAGACGIGCTITCAIGGCAATIT 23456
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             AL135936 116341 bp DNA linear PRI 04-APR-2001 Human DNA sequence from clone RP11-3K6 on chromosome 20. Contains STSs and GSSs, complete sequence.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Homo sapiens
Homo sapiens
Eukaryota, Metazoa, Chordata, Craniata, Vertebrata, Euteleostomi,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           3 TGCTAATACTGTAGGAGTTTCAATTTCAGCAGGGTATCAGAACGGCTTTACTGGTAATAT
   Mammalia; Butheria; Primates; Catarrhini; Hominidae; Homo
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              DB 9; Length 43551;
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          /organism="Homo sapiens"
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                                 (bases 1 to 43551)
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                                                                Garner, P.
Direct Submission
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                                                                                                                                             148464 TACTAATCCTGTGCCAAGTAAATTTCAGTAGACTAACAGAACCCATTCACAGGAAGTAT 148523
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/clone lib="Roche Palo Alto"
/clone lib="Roche Palo Alto"
/note="SNPs developed from assay sequences derived from 15
different strains of mice (as of October 1, 2003). Those
strains include A/J, A/HeJ, 129/Sv, AKR/J, B10.D2-H2/oSnJ,
BALB/CByJ, BALB/GJ, C3H/HeJ, C57BL/GJ, CAST/Ei, DBA/2J,
AL. 'A651
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Human DNA sequence from clone RPS-1091G18 on chromosome 1, complete
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Mammalia; Butheria; Rodentia; Sciurognathi; Muridae; Musinae; Mus.
1 (bases 1 to 651)
Usuka,J., Liao,G., Cheng,J., Nguyen,A., Bach,C., Puech,A.,
MCPherson,J.D., Foernzler,D. and Peltz,G.
Mus musculus SNPs
Unpublished (2003)
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40.3%; Score 27.8; DB 11; Length 651;

Best Local Similarity 65.1%; Pred. No. 1.3e+02;

Matches 41; Conservative 0; Mismatches 22: Tndele A
                                 20; Indels
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Roche Palo Alto Genetics and Genomics Department
Roche Palo Alto
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Email: Jonathan.Usuka@roche.com
Primer A: No primer submitted with this STS
Primer B: No primer submitted with this STS.
Location/Qualifiers
Best Local Similarity ' 66.7%; Pred. No. 60; Matches 40; Conservative 0; Mismatches
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/db_xref="taxon:10090"
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                                                                                           Direct Submission

Direct Submission

Direct Submission

CB10 1SA, UK. E-mail enquiries: humquery@sanger.ac.uk Clone

requeets: clonerequest@sanger.ac.uk

On Mar 31, 2000 this sequence version replaced gi:7327706.

During sequence assembly data is compared from overlapping clones.

Where differences are found these are annotated as variations

together with a note of the overlapping clone name. Note that the

variation annotation may not be found in the sequence submission

corresponding to the overlapping clone, as we submit sequences with

only a small overlap as described above.

The following abbreviations are used to associate primary accession

numbers given in the feature table with their source databases:

EMI; Sw., SWISSPROT; Tr., TREMBL; WP:, WORMPEP; Information

on the WORMBEP database can be found at

http://www.sanger.ac.uk/Projects/C elegans/wormpep This sequence

was generated from part of bacterial clone contigs of human

chromosome 20, constructed by the Sanger Centre Chromosome 20

Mapping Group. Further information can be found at

http://www.sanger.ac.uk/HGP/Chr20

IMPORTANT: This sequence is not the entire insert of clone RP11-3X6

It may be shorter because we sequence overlapping sections only

once, except for a 100 base overlap.

The true left end of clone RP11-97N19 is at 116242 in this

sequence. The true right end of clone RP5-1068E13 is at 100 in this

sequence. The true right end of clone RP5-1068E13 is at 100 in this

sequence. The true right end of clone RP5-1068E13 is at 100 in this

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note="L1PBa repeat: matches -1543. .-1343 of consensus"
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note="LiPAS repeat: matches 5636. .6143 of consensus"
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6312. .16861
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note="LipB1 repeat: matches 2110. 4590 of consensus"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               3461. .8784
/note="LiM2 repeat: matches 1676. .2383 of consensus"
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18884. .18927
/note="22 copies 2 mer ag 93% conserved"
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note="LiPA7 repeat: matches 8. .6141 of consensus"
5255. .16327
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               .286 of consensus"
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  Mammalia; Eutheria; Primates; Catarrhini; Hominidae; Homo.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  082. .5621
note="LIPB1 repeat: matches 4590, .6155 of
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        repeat: matches 4017.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               622. .5907
note="AluSg repeat: matches 1.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Pieter de Jong. For further details :
http://www.chori.org/bacpac/home.htm
VECTOR: pBACe3.6
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'db_xref="taxon:9606"
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               ocation/Qualifiers
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  clone="RP11-3K6"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            db_xref="taxon
chromosome="20
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                               (bases 1 to 116341)
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note="L1M4
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                      REFERENCE
AUTHORS
                                                                                                            JOURNAL
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                                                                                                                                                                                               COMMENT
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note="MLT1D-internal repeat: matches 2. .181 of consensus"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     note="AluJo/FRAM repeat: matches 171. .283 of consensus"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 7976. 38212
/note="L1MC3 repeat: matches 6723. .6956 of consensus"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      /note="AluSg/x repeat: matches 141. .284 of consensus"
complement(36815. .37554)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 .7739 of consensus"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       note="Alusg'x repeat: matches 132. .306 of consensus"
6498. .36531
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        .9071. .39285
note="LiPA12 repeat: matches -62. .153 of consensus"
                                                                                                                                                                                                                                                           .6146 of consensus"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    42913. .43150
Anote="MLTIE repeat: matches 317. .568 of consensus"
43152. .43210
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             2542. 42759
note="MLTLT repeat: matches 106. .305 of consensus"
                                                                                                                                                                                                        /noce="Mirial repeat: matches 1. .361 of consensus"
22911. .27327
/note="Link repeat: matches 1731. .6146 of consensus
conplement(27970. .28271)
/note="match: GSS: Em:AZ006036"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        note="L2 repeat: matches 2338. .2498 of consensus" 5489. .45617
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       /note="MER63C repeat: matches 1. .922 of consensus"
31435. .31494
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              note="L2 repeat: matches 1931. .2745 of consensus"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         note="L1P repeat: matches 865. .3997 of consensus"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        .211 of consensus"
                                                                                                                                                                                                                                                                                                                                                                                                .131 of consensus"
                                                                                                                                                                                                                                                                                                                                                                                                                                         /hote="MIR repeat: matches 14. .249 of consensus" 30448. .30570
/note="MERSA repeat: matches 1. .127 of consensus" 30576. .31434
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        note="Aludo repeat: matches 1. .307 of consensus"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  matches 8. .484 of consensus"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            .74 of consensus"
                                                                                                                                         /note="MIR repeat: matches 17. .203 of consensus"
22329. .22683
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              note="MIR repeat: matches 22. .80 of consensus"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     .189 of
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/note="116 copies 2 mer aa 63% conserved"
36129. .36303
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          note="17 copies 2 mer tg 100% conserved"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               repeat: matches 6956.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     'note="MER5A repeat: matches 129.
31847. .32585
                                                                                                                                                                                                                                                                                                                  complement(29311, 29663)
/note="match: STS: Em:G18101"
29316, 29443
/note="FLAM A repeat: matches 2, 29680, 29905
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19173. .19685
/note="match: GSS: Em:AQ884711"
complement(20875. .21293)
/note="match: GSS: Em:AQ039265"
complement(20920. .21289)
/note="match: GSS: Em:AQ079510"
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6895. 37663
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47024. .47340
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            38453. .38888
/note="MLT1D repeat:
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Assembly program: XGAP4; version 4.5
Sequencing vector: plasmid; L08752; 100% of reads
Chemistry: Dye-terminator Big Dye; 100% of reads
Chemistry: Dye-terminator Big Dye; 100% of reads
Consensus quality: 175618 bases at least Q40
Consensus quality: 177417 bases at least Q30
Consensus quality: 178263 bases at least Q20
Insert size: 178889; aum.of-contigs
Consert size: 187398; 4.0% error; agarose-fp
Quality coverage: 5.15x in Q20 bases; sum-of-contigs Quality
coverage: 5.16x in Q20 bases; agarose-fp
                                                                                                                                                                                                                                                                                                                                                                                                                                                                         arbitrary. Gaps between the contigs are represented as runs of N, but the exact sizes of the gaps are unknown. This record will be updated with the finished sequence as soon as it is available and the accession number will be preserved.
                                                                                                                                                                                                                                                                                                                                                                                                                  NOTE: This is a 'working draft' sequence. It currently consists of 15 contigs. The true order of the pieces is not known and their order in this sequence record is
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  contig of 2297 bp in length
gap of 100 bp
scontig of 18778 bp in length
gap of 100 bp
contig of 13421 bp in length
gap of 100 bp
contig of 6618 bp in length
gap of 100 bp
contig of 6618 bp in length
gap of 100 bp
contig of 26685 bp in length
contig of 13875 bp in length
contig of 13875 bp in length
gap of 100 bp
contig of 13875 bp in length
gap of 100 bp
contig of 29091 bp in length
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contig of 18271 bp in length
gap of 100 bp
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of 15734 bp in length
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of 9390 bp in length
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of 2297 bp in length
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fragment_chain:1"
23425. .25426
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/note="assembly_fragment:01281
                                                                                    Contact: humquery@sanger.ac.uk
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Location/Qualifiers
1. 180298
Acganism="Homo sapiens"
/mol_type="genomic DNA"
/db_xref="taxon:9606"
                                           Center code: SC
Web site: http://www.sanger.ac.uk
                                                                                                                                                         ----- Summary Statistics
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/clone="RP11-542H20"
/clone_lib="RPC1-11.2"
                                                                                                                                  Center project name: bA542H20
Center: Sanger Centre
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Mammalia, Eutheria, Primates, Catarrhini, Hominidae, Homo.
                                                                                                                           Thote="AluY repeat: matches 77. .301 of consensus" 18868. .50537

Thote="LiMEC repeat: matches 1318. .2646 of consensus" 50570. .50850

Thote="LiMEC repeat: matches 997. .1287 of consensus" 52742. .52932
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Submitted (10-JUJ-2001) Sanger Centre, Hinxton, Cambridgeshire,
CB10 15A, UK. E-mail enquiries: humquery@sanger.ac.uk Clone
requests: clonerequest@sanger.ac.uk
On Nov 28, 2000 this sequence version replaced gi:10241378.
                                                                                         note="L1MEc repeat: matches 2646. .2872 of consensus"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  0542. .60701
note="L1MA9 repeat: matches 6119. .6269 of consensus"
                                                                                                                                                                                                                                                                                                                                                                                                    consensus
                                      note="LTRIGC repeat: matches 256. .387 of consensus" 8413. .48645
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Gaps
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note="LTR16C repeat: matches 81. .383 of consensus"
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              /note="FLAM_C repeat: matches 27. .143 of consensus"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                note="MLT1G repeat: matches 494. .544 of consensus"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       /note="L2 repeat: matches 2517. .2748 of consensus"
52123. .62189
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       note="FLAM C repeat: matches 2. .130 of consensus"
5956. .559<u>9</u>9
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              note="MER5B repeat: matches 64. .178 of consensus"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Myss. . Jarvo
note="MIR repeat: matches 124. .242 of consensus"
0491. .60541
    'note="AluSx repeat: matches 1. .312 of consensus"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             note="AluSc repeat: matches 1. .306 of consensus"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                note="MIR repeat: matches 80. .145 of consensus" 2353. .62472
                                                                                                                                                                                                                                                                                    3300. .53550
note="MIR repeat: matches 3. .260 of consensus"
3622. .53659
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       1168 GATGCTATTCCTATTGGAGTTGTATTTGAGTTGATTATCAGCACGCGTT 1119
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Query Match
40.0%; Score 27.6; DB 9; Length 116341;
Best Local Similarity 72.0%; Pred. No. 87;
Matches 36; Conservative 0; Mismatches 14; Indels 0;
                                                                                                                                                                                                                                                                                                                                                                                                note="L1PA8 repeat: matches 5955, .6157 of 4101, .54138
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                1 GATGCTAATACTGTAGGAGTTTCAATTTCAGCAGGGTATCAGAACGGCTT
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                                                                                                                                                                                                                                                                                                                                                                                                                                           note="19 copies 2 mer ac 84% conserved"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  note="22 copies 2 mer gt 97% conserved"
                                                                                                                                                                                                                                                                                                                                                    note="19 copies 2 mer tt 81% conserved"
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HTG; HTGS PHASE1; HTGS_CANCELLED.
Homo sapiens (human)
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           59100
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           6071. .56376
                                                                                                             .48867
                                                                                                                                                                                                                                                                                                                                                                           3664. .53866
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         .61005
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       1437. .61644
                                                                                                                                                                                                                                                                                                                                                                                                                                                                  4763. .54894
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RESULT 11 AL357633/c DEFINITION

ઠે 셤 LOCUS

ACCESSION VERSION KEYWORDS ORGANISM

SOURCE

AUTHORS TITLE

JOURNAL

COMMENT

REFERENCE

/note="assembly_fragment:01934

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Uniting sequence assembly data is compared to vertagoing by the differences are found these are annotated as variations together with a note of the overlapping clone name. Note that the variation annotation may not be found in the sequence submission corresponding to the overlapping clone, as we submit sequences with only a small overlap as described above.

This sequence was finished as follows unless otherwise noted: all regions were either double-stranded or sequenced with an alternate chemistry or covered by high quality data (i.e., phred quality >= 30); an attempt was made to resolve all sequencing problems, such as compressions and repeats; all regions were covered by at least one plasmid subclone or more than one M13 subclone; and the assembly was confirmed by restriction digest, except on the rare occasion of the clone being a YAC.

The following abbreviations are used to associate primary accession numbers given in the feature table with their source databases:

Em: SMBL; Sw: SWISSPROT; Tr:, TREMBL; Wp:, WORNPEP; Information on the WORNPEP database can be found at http://www.sanger.ac.uk/Projects/C elegans/wormpep Clone-derived zebrafish pUC subclones occasionally display inconsistency over the length of monouncleotide A/T runs and conserved TA repeats. Where this is found the longest good quality representation will be
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          90735 AITTIAATCTTGTAGAAGAATCATTTTTATCAGTGTTTCAGAAATTATATTTGGATATTA 90794
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                DNA linear HTG 09-MAY-2003
*** SEQUENCING IN PROGRESS ***,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Repeat names beginning 'Dr' were identified by the Recon repeat discovery system (Zhirong Bao and Sean Eddy, submitted), and those discovery system (Zhirong Bao and Sean Eddy, submitted), and those lab, WashU). For identified by Rick Waterman (Stephen Johnson http://www.sanger.ac.uk/Projects/D_rerio/fishmask.shtml DKEY-93Ml8 is from a Zebzafish BAC library VECTOR: pIndigOBAC-5.
Location/Qualifiers
                                                                                                                                                     During sequence assembly data is compared from overlapping clones.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Eukaryota, Metazoa, Chordata, Craniata, Vertebrata, Euteleostomi,
Mammalia, Eutheria, Rodentia, Sciurognathi, Muridae, Murinae,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      1 (bases 1 to 225538)
Muzny, D. Marie., Metzker, M. Lee., Abramzon, S., Adams, C., Alder, J.,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  2 ATGCTAATACTGTAGGAGTTTCAAATTTCAGCAGGGTATCAGAACGGCTTTACTGGTAATA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           HTG; HTGS PHASE1, HTGS_DRAFT, HTGS_ENRICHED.
Rattus norvegicus (Norway rat)
Rattus norvegicus
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  DB 5;
                  Center: Wellcome Trust Sanger Institute
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Best Local Similarity 63.6%; Pred. No. 82;
Matches 42; Conservative 0; Mismatches
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Rattus norvegicus clone CH230-707,
2 unordered pieces.
AC095510
                                                                     Web site: http://www.sanger.ac.uk
Contact: zfish-help@sanger.ac.uk
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       /mol_type="genomic DNA"
/db_xref="taxon:7955"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               /organism="Danio rerio"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          /clone="DKEY-93M18"
/clone lib="DanioKey"
  --- Genome Center
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                                                     code: SC
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            submitted.
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AC095519/c
LOCUS
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Submitted (27-SEP-2003) Wellcome Trust Sanger Institute, Hinxton,
Cambridgeshire, CB10 1SA, UK. E-mail enquiries:
zfish-help@sanger.ac.uk Clone requests: clonerequest@sanger.ac.uk
On Sep 24, 2003 this sequence version replaced gi:33620376.
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       3 TGCTAATACTGTAGGAGTTTCAATTTCAGCAGGGTATCAGAACGGCTTTACTGGTAATAT
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                                                                                                                                                                                                                                                                           /note="assembly_fragment:02008"
50563. .68833
/note="assembly_fragment:01833
fragment chain:3"
68934. .71230
/note="assembly_fragment:00565
fragment_chain:3"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      /note="assembly_fragment:00312
fragment_chain:3"
137233. 151107
/note="assembly_fragment:01518
fragment_chain:3"
151208. 180298
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                  35527. .32211
note="assembly fragment:02409
ragment chain:1"
                                                                                             12312. 35664

hote="assembly fragment:01045

ragment chain:2"

5765. 40972
                                                                                                                                                                                                note="assembly fragment:01398
ragment chain:2"
11073. .50462
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   note="assembly fragment:02415
ragment chain:3"
0209. .103629
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 note="assembly fragment:01424 ragment_chain:3" 03730. _110347
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ragment_chain:3"
10448. __137132
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fragment chain:3
clone_end:T7
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Pred. No. 83;
0; Mismatches
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chain:1"
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Danio rerio
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  ragment
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Best Local Similarity
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Indels

Length 211643;

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shotgun sequence only contigs will be indicated in the feature

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Advalace, Allen, I., Albroogs, S., Amin, A., Brough, D., Andyalacendra, A., Allen, C., Milen, I., Albroogs, S., Amin, A., Burmeread, M., Endmand, P., Bardaranako, D., Barder, W., Burmeread, M., Estammed, P., Brough, M., Barder, M., Burmeread, M., Estammed, M., Barder, M., Burmeread, M., Estammed, M., Carver, D., Chen, G., Chin, D., Chen, G., Chin, D., Chen, G., Chin, D., Chen, G., Chin, D., Chen, G., Ch
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JOURNAL REFERENCE AUTHORS TITLE JOURNAL

TITLE

REFERENCE AUTHORS TITLE JOURNAL

COMMENT

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NOTE: Betimated insert size may differ from sequence length (see http://www.hgsc.bcm.tmc.edu/docs/Genbank_draft_data.html).
NOTE: This is a "working draft" sequence. It currently consists of 2 contigs. The true order of the pieces is not known and their order in this sequence record is arbitrary. Gaps between the contigs are represented as runs of N, but the exact sizes of the gaps are unknown. This record will be updated with the finished sequence as soon as it is available and the accession number will be preserved.
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                                                                                                                                                                                                                                                                                                                      Quality coverage: 6x in Q20 bases; sum-of-contigs estimation
                                                                                                                                                                                                                                                                                                 sum-of-contigs estimation
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3593 3692: gap of unknown length
3693 225538: contig of 221846 bp in length.
Location/Qualifiers
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                                                                                                                                                                                                                       Consensus quality: 181494 bases at least Q40 Consensus quality: 186363 bases at least Q30 Consensus quality: 189680 bases at least Q30 Estimated insert size: 189747; sum-of-contige
                                                             Web site: http://www.hgsc.bcm.tmc.edu/
Contact: hgsc-help@bcm.tmc.edu
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Center: Baylor College of Medicine Center code: BCM
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/organism="Rattus norvegicus"
/mol type="genomic DNA"
/db Xref="taxon:10116"
/clone="CH230-707"
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40.0%; Score 27.6; DE
Best Local Similarity 63.6%; Pred. No. 81;
Matches 42; Conservative 0; Mismatches
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                                                                                                                                                       Center clone name: CH230-707
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clone_end:T7"
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clone_end:T7"
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173486. .175055
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                                                                                                                                  Center project name: GCPE
                                                                                                                                                                                                    Assembly program: Atlas;
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74525. .75949
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complement (162735.
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/note="wgs_contig"
2104. .3592
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58076. .60<u>3</u>33
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site:EcoRI
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RESULT 14 AC106652

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of Molecular and Human Genetics, Baylor College of Medicine, One Baylor Plaza, Houston, TX 77030, USA.

On May 13, 2003 this sequence version replaced gi:23264150.

The sequence in this assembly is a combination of BAC based reads and whole genome shotgun sequencing reads assembled using Atlas (http://www.hgsc.bcm.tmc.edu/projects/rat/). Each contig described in the feature table below represents a scaffold in the Atlas assembly (a 'contig-scaffold'). Within each contig-scaffold, individual sequence contigs are ordered and oriented, and separated by sized gaps filled with Ns to the estimated size. The sequence may extend beyond the ends of the clone and there may be sequence contigs within a contig-scaffold that consist entirely of whole genome shotgun sequence reads. Both end sequences and whole genome shotgun sequence reads. Both end sequences and whole genome table.
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NOTE: This is a "working draft' sequence. It currently consists of 2 contigs. The true order of the pieces is not known and their order in this sequence record is
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Center Clone name: CH230-66P3
Assembly program: Atlas 3.0;
Consensus quality: 227435 bases at least Q40
Consensus quality: 229962 bases at least Q30
Consensus quality: 211424 bases at least Q20
Estimated insert size: 231787; aum-of-contigs estimation
Quality coverage: 7x in Q20 bases; sum-of-contigs estimation
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Center: Baylor College of Medicine
Center code: BCM
Web site: http://www.hgsc.bcm.tmc.edu/
Contact: hgsc-help@bom.tmc.edu
Center project Information
Center project name: GLTL
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                                                                                  COMMENT
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             AC106652 238937 bp DNA linear HTG 13-MAY-2003
Rattus norvegicus clone CH230-66P3, WORKING DRAFT SEQUENCE, 2
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                                                                                                                                                                                                                                                                              Eukaryota, Metazoa, Chordata, Craniata, Vertebrata, Buteleostomi,
Mammalia, Eutheria, Rodentia, Sciurognathi, Muridae, Murinae,
                                                                                                                                            AC106652.4 GI:30578574
HTG; HTGS_PHASE1; HTGS_DRAFT; HTGS_FULLTOP.
Rattus norvegicus (Norway rat)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 (bases 1 to 238937)
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Unpublished
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Direct Submission
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                                               DEFINITION
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TITLE
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KEYWORDS
SOURCE
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ö 9 1 GATGCTAATACTGTAGGAGTTTCAATTTCAGCAGGGTATCAGAACGGCTTTACTGGTAAT 40.0%; Score 27.6; DB 2; Length 238937; ilarity 63.6%; Pred. No. 81; Conservative 0; Mismatches 24; Indels 0; .236748) 1. .2692 /note="wgs_end_extension clone_end:T7" 7349. .. 8179 /note="clone_boundary clone_end:T7 site:EcoRI /mol_type="genomic DNA" /db_xref="taxon:10116" end_sequence:BH269831" 134429. .135821 end_sequence:BH269833" 'note="clone_boundary

8 6 8

DEFINITION

ACCESSION VERSION KEYWORDS SOURCE

AC105534 LOCUS ORGANISM

REFERENCE AUTHORS

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Submitted (13-NOV-2002) Human Genome Sequencing Center, Department of Molecular and Human Genetics, Baylor College of Medicine, One Baylor Plaza, Houston, TX 77030, USA ON NOV 13, 2002 this sequence version replaced gi:22857243.

The sequence in this assembly is a combination of BAC based reads and whole genome shockyun sequencing reads assembled using Atlas (http://www.hgsc.bcm.tmc.edu/projects/rat/). Each contig described in the feature table below represents a scaffold in the Atlas assembly (a 'contig-scaffold'). Within each contig-scaffold, individual sequence contigs are ordered and oriented, and separated by sized gaps filled with Ns to the estimated size. The sequence may extend beyond the ends of the clone and there may be sequence contigs within a contig-scaffold that consist entirely of whole genome shotgun sequence reads. Both end sequences and whole genome shotgun sequence reads. Both end sequences and whole genome table.
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NOTE: This is a 'working draft' sequence. It currently consists of 3 contigs. The true order of the pieces is not known and their order in this sequence record is arbitrary. Gaps between the contigs are represented as runs of N, but the exact sizes of the gaps are unknown. This record will be updated with the finished sequence as soon as it is available and the accession number will be preserved.
                                Direct Submission
Submitted (09-JAN-2002) Human Genome Sequencing Center, Department
Submitted (109-JAN-2002) Human Genetics, Baylor College of Medicine, One
Baylor Plaza, Houston, TX 77030, USA
3 (bases 1 to 227763)
Rat Genome Sequencing Consortium.
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Center code: BCM
Web site: http://www.hgsc.bcm.tmc.edu/
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/db_xref="taxon:10116"
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/note="wgs_contig"
701371. .224889
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219496. .221046
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6480. .9433
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/note="wgs_contig"
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Anyalabechi,V., Angerker,M.Lee., Abramizon,S., Adder,J.,
Anyalabechi,V., Angerker,M.Lee., Amin,A., Anguiano,D.,
Anyalabechi,V., Angen,A., Ander,B., Baraneted,B., Benahmed,F.,
Biswalo,K., Blait,J., Blankenburg,K., Blyth,P., Brown,M.,
Biswalo,K., Blait,J., Blankenburg,K., Blyth,P., Brown,M.,
Cardensa,V., Carter,K., Caurch,P., Burnel,R.K., Calderon,E.,
Cardensa,V., Carter,K., Caurch,P., Burnel,R.K., Calderon,E.,
Cardensa,V., Carter,K., Cawaro,L., Duval,B., Baves,C.,
Davila,M., Davis,C., Davy-Carroll,L., De Anda,C., Detechich,D.,
Devalad,O., Denson,S., Durn,A., Durbin,K., Duval,B., Baves,K.,
Ernser,C., M., Cabisi,A., Gante,R., Garcia,M., Gaerz,M.,
Gebregeorgis,E., Geer,K., Gill,R., Grady,M., Guerz,M.,
Gebregeorgis,E., Geer,K., Gill,R., Grady,M., Guerra,M.,
Gebregeorgis,E., Haves,A., Henderson,N., Hernandez,N.,
Harvey,Y., Havlas,P., Haves,A., Henderson,N., Hernandez,N.,
Harnandez,S., Fillys, W., Fallys, M., Fallys, M., Main,L., Main,L.,
Harnandez,R., Haves,A., Haden,S., Man,C., Man,Line,X., Mangum,A.,
Jackson,L., Jang,H., M., Hander,D., Johnson,R., Johnson,R.,
Jackson,B., Man,Liu,Y., London,P., London,P., London,P., London,B., Johnson,B., Johnson,R., Major,C.,
Kowis,C., Kasth,C., L., Lebow,H., Levan,J., Leval,L., Li,Z., Liu,J.,
Lut,W., Liu,Y., Lun,W., Liu,Y., Marin,M., Malloy,M., Maloy,X., Mangum,A.,
Mangum,B., Mapued,M., Manicl,R., Martinez,E.,
Milosauljewai,L., London,P., Deres,J., Leval,J., Leval,L., Liu,J., Liu,J.,
Mangum,B., Mapued,M., Mandou,M., Maloy,R., Major,C.,
Rowis,C., Reallys, M., Perez,A., Perez,L., Panken,B.,
Mangum,B., Wallys,R., Martin,R., Martinez,E.,
Milosauljewai,L., London,P., Marmoud,M., Maloy,R., Major,R.,
Nawackelemen,D., Wallor,R., Martin,R., Malor,R., Malor,R.,
Nawackelemen,D., Walons,B., Mandoud,M., Malos,R., Malos,R.,
Really,S., Pall,H., Reeve,R., Reeves,R., Reeves,R., Reigh,R.,
Reilly,B., Reilly,M., Ren,Y., Reeves,R., Reeves,R., Reigh,R.,
Reilly,B., Reilly,M., Ren,Y., Reeves,R., Reeves,R., Reigh,R.,
Reilly,B., Reilly,M., Ren,Y., Ru
90745 GAGGGTAAAAAGGTAGGAGTTGTGATTTGCTCAGTGTCCCATTAAGGCTCTTTTGGGAAG 90804
                                                                                                                                                                                                                                          227763 bp DNA linear HTG 13-NOV-2002 Rattus norvegicus clone CH230-22109, *** SEQUENCING IN PROGRESS ***, 3 unordered pieces.
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Mammalia, Eutheria, Rodentia, Sciurognathi, Muridae, Murinae,
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HTG; HTGS_PHASE1; HTGS_ENRICHED.
Rattus norvegicus (Norway rat)
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Search completed: November 20, 2005, 07:31:37 Job time : 1460 secs

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| | | Description | | | Aaa73991 Sugarcane | Aaz39510 Sugarcane | | Adl38796 Human ova | Adi67577 Human ova | Ads47069 Bacterial | Ado39649 Yeast CHS | Adt05481 Haemophil | Adp04338 Squid pot | Aad36229 Human tra | Adt05646 Haemophil | Ad184829 DNA up-re | Ad184828 DNA up-re | Ad184830 DNA up-re | Abv58455 Human pro | Adr19228 Bacteriop | Aas71709 DNA encod | Ade81111 Bovine 1- | Adp98579 C. albica |
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| SUMMARIES | | ID | | 2000 | AAA / 3991 | AAZ39510 | ABX93826 | ADL38796 | ADI67577 | ADS47069 | AD039649 | ADT05481 | ADP04338 | AAD36229 | ADT05646 | ADL84829 | ADL84828 | ADL84830 | ABV58455 | ADR19228 | AAS71709 | ADE81111 | ADP98579 |
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| Adt46409 Bacterial | Aad47827 Haemophil | Aas53284 Haemophil | Aca34109 Prokaryot | Abz14386 Arabidops | Aax99550 Nucleic a | Aca52809 Prokaryot | Adt05524 Haemophil | Abd33223 Human can | Aak84218 Human imm | Ada02885 Mouse Blm | Adb72623 Mouse Blm | Adm74480 Murine ca | Adc85364 Human Pap | Continuation (5 of | Adt05736 Haemophil | Acn45144 Mouse gen | Adol3631 SNP targe | Aaa41504 Human sec | Ada09632 Restricti | Aaa57037 Human col | Abt12459 Orestes s | Acd91753 Human col | Adh31826 Yeast sma | Abx44290 Bovine ES |
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| ADT46409 | AAD47827 | AAS53284 | ACA34109 | ABZ14386 | AAX99550 | ACA52809 | ADT05524 | ABD33223 | AAK84218 | ADA02885 | ADB72623 | ADM74480 | ADC85364 | AAT42063 04 | ADT05736 | ACN45144 | AD013631 | AAA41504 | ADA09632 | AAA57037 | ABT12459 | ACD91753 | ADH31826 | ABX44290 |
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| 3.2 | 3.5 | 23.2 | 23.2 | 3.2 | 3.2 | 3.2 | 3.5 | 23.2 | 23.2 | 23.2 | 23.2 | 23.2 | 23.2 | 23.2 | 23.2 | 23.2 | 21.7 | 21.7 | 21.7 | 21.7 | 21.7 | 21.7 | 21.7 | 1.7 |
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| c 21 | c 22 | c 23 | c 24 | 25 | c 26 | c 27 | c 28 | c 29 | 30 | 31 | 32 | 33 | 34 | 35 | 36 | c 37 | 38 | 39 | c 40 | 41 | 42 | 43 | 44 | 45 |

ALIGNMENTS

| 959 standard; DNA; 7568 BP. N-1999 (first entry) cane bacilliform virus genomic sequence. cane bacilliform virus; promoter; ScBV promoter; transgenic plant deficit resistance; peat resistance; herbicide resistance; tional content; protein manufacture; ss. cane bacilliform virus. 9190-A1. B-1999. G-1997; 97WO-IB001338. G-1997; 97WO-IB001338. J UNIV MINNESOTA. wski N, Tzafrir I, Somers DA, Lockhart B, Torbert K; B; AAY01078. B; AAY01078. isolated DNA molecule comprising a sugarcane bacilliform virus ter - useful for generating fertile transgenic plants with icial agronomic characteristics. osure; Fig 2; 67pp; English. sequence represents a sugarcane bacilliform virus promoter. The specification refer to Seq ID Numbers that are life framents of this sequence, however, there is no indication in pecification as to which nucleotides of the promoter sequence. | X277 |
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(SCBV) promoter (including a biologically active subunit). Fertile transgenic plants produced by transformation with the DNA sequence are useful for conventional plant breeding programs. Other transgenic plants are useful for generating beneficial agronomic characteristics, including resistance to water deficit, pest resistance, herbicide resistance, increased yield, improved nutritional content, and improved processing characteristics. They are also useful for commercial protein manufacture. The SCBV promoter is a strong, constitutive promoter in may cells, enabling the expression of genes in fertile transgenic monocot or dicot plants, which allows genetic engineering of improved plant
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Sugarcane bacilliform virus; ScBV; ScBV promoter; transgenic plant; ds.
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                                                                                                                                                                                                                                                                                                                                                                                                                      Sequence 7568 BP; 2602 A; 1472 C; 1805 G; 1689 T; 0 U; 0 Other;
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ID AAA73991 standard; DNA; 7568 BP.
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13-AUG-1997;
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                                                                                                 Gaps
breeding programmes, including in the creation of new mutant plants through insertional mutagenesis
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Sequence 7568 BP; 2602 A; 1468 C; 1809 G; 1689 T; 0 U; 0 Other;
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                                        Sequence 7568 BP; 2602 A; 1468 C; 1809 G; 1689 T; 0 U; 0 Other;
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                                                                                                                                                                                                                                                                                                                                      Sugarcane bacilliform virus; ScBV; promoter; transgenic plant;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               DA;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Length 7568;
                                                                    Length 7568;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Somers
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                                                                                               0; Indels
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Score 18; DB 2;
Pred. No. 7.9;
                                                                  Score 18; DB 2;
Pred. No. 7.9;
                                                           26.1%; bc...
100.0%; Pred. No. ...
0; Mismatches
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                                                                                                                                                                                                                                                                                                          Sugarcane bacilliform virus gene sequence.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Disclosure; Fig 2A-E; 34pp; English.
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100.0%; Pre
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  2684 TICAATTTCAGCAGGGTA 2667
                                                                                                                                            2684 TTCAATTTCAGCAGGTA 2667
                                                                                                                                                                                                                          BP.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             ABX93826 standard; DNA; 7568 BP.
                                                                                                                                                                                                                                                                                                                                                    monocot plant; dicot plant; ss.
                                                                                                                           21 TTCAATTTCAGCAGGTA 38
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  TTCAATTTCAGCAGGTA 38
                                                                                                                                                                                                          AAZ39510/c
ID AAZ39510 standard; DNA; 7568
                                                                                                                                                                                                                                                                                                                                                                                                                                                               96US-00694869
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           97WO-IB001338
                                                                                                                                                                                                                                                                                                                                                                             Sugarcane bacilliform virus.
                                                                                                                                                                                                                                                                                11-FEB-2000 (first entry)
                                                                                                 Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Torbert K,
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            WPI; 1999-181047/15.
                                                            Query Match
Best Local Similarity
Matches 18; Conserv
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Local Similarity
ses 18; Conserv
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         P-PSDB; AAY57165.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         13-AUG-1997;
                                                                                                                                                                                                                                                                                                                                                                                                                                                               09-AUG-1996;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Lockhart B,
                                                                                                                                                                                                                                                                                                                                                                                                          US5994123-A.
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                                                                                                                                                                                                                                                      AAZ39510;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Query Match
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ID ABX93
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The invention relates to an isolated and purified DNA molecule, which comprises a promoter (appearing as ABX93829, Promoter 1) or its fragment with promoter activity, where the DNA molecule does not encode a sugarcane bacilliform virus (ScBv) polypeptide. Also included is an expression cassette comprising a first DNA segment, which comprise Promoterl or its fragment with promoter activity, functional in a plant cell poperably linked to a second DNA segment encoding a protein or RNA transcript, where the second DNA segment encoding a protein or RNA transcript, where the second DNA segment does not encode a sugarcane bacilliform virus polypeptide. The DNA or promoter is useful for expressing proteins and/or RNA transcripts in transgenic plants, or for conferring constitutively high levels of expression of operably linked preselected DNA segments in both monocotyledonous and dicotyledonous plants, plant tissue, plant parts or plant cells. The DNA or promoter is particularly useful in plant genetic engineering to obtain fertile transgenic plants (e.g. oat, wheat, soybean, corn, tobacco, rice, barley, potato, tomato, lettuce, oilseed rape, cotton, flax, sugar beet, sorghum, characteristics or traits, e.g. increased stress tolerance, pest resistance (eig. bacteria, viruses or fungi), improved yielde, improved yielde, improved yielde, improved yielde, improved yielde, improved or increased to mand to the protein or increased to mand the constant cannot or improved yielde, improved yielde, improved yielde, improved yielde.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  New sugarcane bacilliform virus promoters, useful for obtaining transgenic plants (e.g. oat) with improved properties, e.g. increased stress tolerance, pest or disease resistance, improved yields or improved
                                                                                                                        ScBv; ds; genome; promoter; transgenic plant; agronomic property;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Sequence 7568 BP; 2602 A; 1468 C; 1809 G; 1689 T; 0 U; 0 Other;
                                                                                                                                           stress tolerance; pest resistance; disease resistance; yield;
nutritional value; grain composition.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       which the promoters of the invention were isolated
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Somers DA, Lockhart B,
                                                                                                                                                                                                                                                                                                                                                   /*tag= b
/note= "Claimed in claim 1"
                                                                             Sugarcane bacilliform virus (ScBV) genome.
                                                                                                                                                                                                                                                                                       /*tag= a
/product= "ScBV protein"
5999. .7420
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                                                                                                                                                                                                                                              Location/Qualifiers
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           97WO-IB001338.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 11-FEB-2000; 2000US-00502831
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         96US-00694869
                                                                                                                                                                                                     Sugarcane bacilliform virus.
                                    03-JUN-2003 (first entry)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Olszewski N, Tzafrir I,
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           13-AUG-1997;
08-JUL-1999;
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ABX93826;
                                                                                                                                                                                                                                                                                                                                  promoter
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Torbert KA;

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The invention relates to nucleic acid markers which are overexpressed in ovarian cancer cells as compared to their expression in normal (i.e. non-cancerus) ovarian cells. The invention also relates to polypeptides encoded by the markers, antibodies that selectively bind to the encoded by the markers, antibodies that selectively bind to the corresponding to a marker of the invention and a method of treating a corresponding to a marker of the invention and a method of treating a corresponding to a marker of the invention and a method of treating a patient afflicted with ovarian cancer comprising providing to cells of the patient antisense oligonuclectide complementary to a marker of the invention. The markers comparing the level of expression of a marker in a patient sample and a normal level of expression of the capression levels indicates ovarian cancer. The level of expression of a marker in a control non-ovarian cancer. The level of expression of a capression levels indicates ovarian cancer. The level of expression of a capression levels indicates ovarian cancer. The level of expression of a capression of the marker corresponds to a secreted protein or to a transcribed capted or its portion. The level of expression of the marker is assessed by detecting the presence of protein or protein or protein fragment is detected using an antibody that specifically binds with the corresponding the presence of a transcribed corresponding to the marker or anneals with a portion of the marker is also used for monitoring the presence of a transcribed corresponding the presence of a transcribed corrected encompassing the marker, under stringent conditions. The patient which involves detecting expression of the marker in a patient capter which involves detecting expression of the marker in a patient condition at a first point in time, repeating the method at a subsequent crime and compassing the level of expression of or transcribed out time and compassing the level of expression conditions or patient which involves detecting
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Novel isolated nucleic acid molecules (markers) overexpressed in ovarian cancer cells as compared to their normal non-cancerous ovarian cells are used to characterize stage, grade, histological type of ovarian cancer.
                                                                                                                                                                                                                                                                                                                                      Human; ovarian cancer; ds; tumour; cytostatic; DNA marker.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Disclosure; SEQ ID NO 12686; 106pp; English.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     (MILL-) MILLENNIUM PREDICTIVE MEDICINE INC.
                                                                                                                                                                                                                                                                                          Human ovarian cancer DNA marker #12686
                         2684 TTCAATTTCAGCAGGTA 2667
21 TTCAATTTCAGCAGGTA 38
                                                                                                                                                   ADL38796 standard; DNA; 480 BP.
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2000US-0207124P.
2000US-0211940P.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   21-MAR-2001; 2001WO-US009126
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              2000US-0216820P
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                                                                                                                                                                                                                                             20-MAY-2004 (first entry)
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                                                                                                                                                                                                                                                                                                                                                                                   Homo sapiens.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               21-MAR-2000;
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sequence is the ScBv genome from

Gaps

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26.1%; Score 18; DB 8; Length 7568; 100.0%; Pred. No. 7.9; 0; Mismatches 0; Indels

Query Match 26.1. Best Local Similarity 100. Matches 18; Conservative

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ADS47069;
                                                                                                                                                                                                                                                           257
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              (CAOY/)
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          (HINK/)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    (SLAT/)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                (CHEN/
                                                                                                                                                                                                                                                                                                RESULT 7
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      The invention relates to nucleic acid markers which are overexpressed in ovarian cancer cells as compared to their expression in normal (i.e. noncovarian cancer cells as compared to their expression in normal (i.e. noncomposed by the markers, antibodies that selectively bind to the cancerous) ovarian cancer involving that selectively bind to the corresponding to a marker of the invention and a method of treating a patient afflicted with ovarian cancer comprising providing to cells of the patient afflicted with ovarian cancer comprising providing to cells of the patient antisense oligonucleotide complementary to a marker of the invention. The markers are useful for assessing if a patient is afflicted with ovarian cancer, which involves comparing the level of expression of the marker in a control non-ovarian cancer sample. A difference between the expression levels indicates ovarian cancer. The level of expression of a marker corresponds to a secreted protein or to a transcribed protein or protein c fragment corresponding to the marker. The presence of protein or protein c fragment is detected using an antibody that specifically binds with the protein or protein of protein or protein or protein of the marker.
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Novel isolated nucleic acid molecules (markers) overexpressed in ovarian cancer cells as compared to their normal non-cancerous ovarian cells are used to characterize stage, grade, histological type of ovarian cancer.
                                                                                  Gaps
 This sequence represents a human ovarian cancer DNA marker of the
                                                                                  ö
                                                         5; Length 480;
                                                                                                                                                                                                                                                                                  Human; ovarian cancer; ds; tumour; cytostatic; DNA marker.
                                                                                  0; Indels
                                  Sequence 480 BP; 167 A; 58 C; 90 G; 164 T; 0 U; 1 Other;
                                                         DB 5
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   (MILL-) MILLENNIUM PREDICTIVE MEDICINE INC.
                                                                                 Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Disclosure; SEQ ID NO 319; 106pp; English.
                                                        Score 17;
Pred. No.
                                                                                                                                                                                                                                                            Human ovarian cancer DNA marker #319.
                                                 24.6%; Scor.
100.0%; Pre
                                                                                                                             257 GAGTTTCAATTTCAGCA 241
                                                                                                                                                                     17 GAGTTTCAATTTCAGCA 33
                                                                                                                                                                                                                                                                                                                                                                                                     21-MAR-2000; 2000US-0191031P.
25-MAY-2000; 2000US-0207134P.
15-UTU-2000; 2000US-0211940P.
07-UTL-2000; 2000US-021080P.
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21-DEC-2000; 2000US-0257672P.
                                                                                 Conservative
                                             Query Match
Best Local Similarity
Local 17; Conserve
             invention.
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the marker is assessed by detecting the presence of a transcribed polynucleotide which anneals with the marker or anneals with a portion of the polynucleotide comprising the marker or anneals with a portion of perpension polynucleotide comprising the marker, under stringent conditions. The marker is also used for monitoring the progression of the marker in a patient which involves detecting expression of the marker in a patient sample at a first point in time, repeating the method at a subsequent time and comparing the level of expression. The method at a subsequent using an ovariant issue sample. A composition comprising a marker, polypeptide or antibody of the invention is used to treat ovarian cancer. This sequence represents a human ovarian cancer DAA marker of the invention. Note: The sequence data for this patent did not form part from WIPO at ftp.wipo.int/pub/published_pct_sequences.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        New recombinant DNA construct comprising a promoter positioned to provide for expression of a polynucleotide encoding a polypeptide from a microbial source, useful for producing plants with improved properties.
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Recombinant DNA construct; transformed plant; improved plant property; cold tolerance; heat tolerance; drought tolerance; berbicide; osmosis; pathogen tolerance; pest telerance; plant disease resistance; cell cycle pathway modification; plant growth regulator; homologous recombination; seed oil yield; protein yield; carbohydrate; nitrogen; phosphorus; photosynthesis; lignin; galactomannan; bacterial polymucleotide; gene; ss.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Gaps
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Pred. No. 28;
Mismatches 0; Indels
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          24.6%; Score 17;
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ID ADS47069 standard; cDNA; 2016 BP.
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Best Local Similarity 100.0%; Pr.
Matches 17; Conservative 0;
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HINKLE G J.
SLATER S C.
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transformed plant having an improved property. The plant is a crop plant such as maize or soybean. The method of producing a transformed plant having an improved property comprises transforming a plant with the recombinant DNA construct and growing the transformed plant, where the polynucleotide or polypeptide is useful for improving plant with the polynucleotide or polypeptide is useful for producing plants with improved plant properties. The recombinant DNA construct is useful for producing plants with improved plant properties, e.g. improved cold, heat or drought tolerance, colerance to herbicides, extreme osmotic conditions, pathogens or peets, increased resistance to plant disease, better growth rate by modification of the cell cycle pathway with plant growth regulators, increased rate of condons recombination, modified seed oil or protein yield and/or content, improved plant growth and development under at least on stress providing improved plant growth and development under at least on stress condition, improved lignin production or improved galactomannan condition. Note: The sequence data for this patent did condition part of the printed specification but was obtained in electronic condition at least on sequence them.
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   The present invention relates to heterologous genes comprising non-plant 3'-termination sequences and plant expression cassettes incorporating the heterologus genes. The invention is useful for gene expression in plant
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         New recombinant expression cassette comprising a promoter that is functional in plants, operably linked with a coding sequence and a non-plant 3' termination sequence, useful for gene expression in plant cells.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Heterologous gene; expression cassette; gene expression; yeast; CHS5;
  comprising the recombinant DNA construct and a method of producing a
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           DB 13; Length 2016; 28;
                                                                                                                                                                                                                                                                                                                                                                                                                                                 Sequence 2016 BP; 734 A; 381 C; 459 G; 442 T; 0 U; 0 Other;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     0; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           24.6%; Score 17; DB 100.0%; Pred. No. 28; tive 0; Mismatches
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Query Match
Best Local Similarity 100.
Matches 17; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Saccharomyces cerevisiae.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Yeast CHS5 (CAL3) gene
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              (WILK/) WILKINSON J Q.
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GENBANK; Z49198.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    (MCBR/) MCBRIDE K. (BERT/) BERTAIN S.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          US2004092020-A1
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 New polynucleotides of nontypeable strain of Haemophilus influenzae, useful for treating or preventing NTHi bacterial infections of the middle ear and/or nasopharynx.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     The invention comprises nucleotide sequences (genes) from the genome of
cells. The present sequence is yeast CHS5 (CAL3) gene. This sequence is
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   nontypeable strain of Haemophilus influenzae (WTHi). The NTHi DNA sequences of the invention are useful for treating or preventing NTHi bacterial infections of the middle ear and/or nasopharynx. The present nucleic acid represents an NTHi contig sequence of the invention.
                                                                                                Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Gaps
                                                                                                                                                                                                                                                                                                                                           middle ear bacterial infection; nasopharynx bacterial infection; ds;
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                                                                                                                                                                                                                                                                                                               Haemophilus influenzae (NTHi) contig DNA sequence - SEQ ID 517.
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                                        0 U; 0 Other;
                                                                    12; Length 3379;
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                                                               Score 17; DB 1
Pred. No. 28;
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                                        Sequence 3379 BP; 1156 A; 633 C; 694 G; 896
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100.0%; Pre-
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100.0%; Pic
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                                                                                                                                           1879 GGAGTTTCAATTTCAGC 1863
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                                                                                                                            16 GGAGTTTCAATTTCAGC 32
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                                                                              Local Similarity 100.
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                                                                                                                                                                                                                                                                                                                                                                                   Haemophilus influenzae.
             used in the invention
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tes 17; Conserv
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standard name= "Single nucleotide polymorphism (SNP)"
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                                                                                                                                                                                                    product= "Human transporter protein"
                          Location/Qualifiers
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replace(28789, T)
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16925. .17053
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replace(24723,
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23803. .25118
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Homo sapiens.
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Human; transporter protein; immune response; pharmacogenomic analysis; drug screening; gene therapy; single nucleotide polymorphism; SNP; immunostimulant; chromosome 18; gene; ds.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Material useful for screening agonist of invertebrate animal potential dependent calcium channel, comprises spear squid potential-dependent-calcium-channel alpha 1 sub-unit (LoCav2) or its variant protein.
                                                                                                                                                                                                  /*tag= a
/product= "Squid potential dependent calcium channel-
related protein #1"
/transl_except= (pos:4594. .4596, aa:Lys)
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                                         screening; invertebrate animal potential dependent calcium channel;
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0
                                                  potential-dependent calcium channel alpha I subunit; LoCav2; potential-dependent calcium-channel beta subunit; myogenic potential-dependent calcium channel alpha-1 subunit; myogenic potential-dependent calcium channel alpha-1 subunit; insect repellent; pesticide; squid; gene; ds.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        DB 12; Length 6591; 28;
            Squid potential dependent calcium channel-related gene #1.
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Best Local Similarity 100.0%; Pred. No.
Matches 17; Conservative 0; Mismatch
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P-PSDB; ADP04337.
                                                                                                                                              Loligo bleekeri
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wew polynuclectides of nontypeable strain of Haemophilus influenzae, useful for treating or preventing NTHi bacterial infections of the middle ear and/or nasopharynx.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             gene potential; multi-lineage; cell commitment; haematopoietic stem cell; HSC; multipotent progenitor; MPP; common lymphoid progenitor; CMP; bone marrow stem cell; mouse; murine; ds.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Classifying an unknown multi-lineage affiliated gene comprises isolating expressed nucleic acid sequences from the discrete cell sub-populations.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                The invention comprises nucleotide sequences (genes) from the genome of nontypeable strain of Haemophilus influenzae (NTH1). The NTH1 DNA sequences of the invention are useful for treating or preventing NTH1 bacterial infections of the middle ear and/or nasopharynx. The present nucleic acid represents an NTH1 DNA sequence of the invention.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Sequence 135356 BP; 41426 A; 24873 C; 27795 G; 41257 T; 0 U; 5 Other;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        DNA up-regulated in murine common lymphoid myeloid cells SegID 1222.
middle ear bacterial infection; nasopharynx bacterial infection; ds.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Score 17; DB 13; Length 135356;
Pred. No. 27;
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Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                         Claim 1; SEQ ID NO 682; 88pp; English.
                                                                                                                                                                                                                                                                                        Bakaletz LO, Munson RS, Dyer DW,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  24.6%; Scc...
100.0%; Pre/
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 ADL84829 standard; DNA; 326 BP
                                                                                                                                                                                                                                                 (CHIL-) CHILDRENS HOSPITAL INC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     17 GAGTTTCAATTTCAGCA 33
                                                                                                                                                               05-MAR-2004; 2004WO-US007001.
                                                                                                                                                                                                          06-MAR-2003; 2003US-0453134P.
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Best Local Similarity luv...
Local 17; Conservative
                                                                                                                                                                                                                                                                                                                                                               New polynucleotides of useful for treating --
                                        Haemophilus influenzae.
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                                                                                                                        16-SEP-2004
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              The present invention relates to novel human transporter proteins and nucleic acids encoding them. Sequences of the invention are useful as query sequences. In database searches to identify other family members or related sequences. The proteins may be used to raise antibodies or to elicit immune responses, in drug screening assays, as reagents in assays designed to quantitatively determine levels of the protein in biological fluids, as markers for tissues in which the corresponding protein is preferentially expressed, in cell-based or cell-free systems, to identify modulators of protein activity, as targets for diagnosing a disease or predisposition to a disease mediated by the peptide, in pharmacogenomic analysis, and to treat disorders characterised by inappropriate or useful in detecting mutations in transporter genes and gene expression constructs for controlling transporter gene sypression constructs for controlling transporter gene therapy of patients with cells that are aberrant in transporter gene expression. The present sequence is human transporter genomic DNA which is located on
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       New human transporter peptides and nucleic acids, useful in identifying modulators of transporter peptides, in pharmacogenomic analysis, or as targets for diagnosing a disease or predisposition to a disease mediated
                                                                                                   /*tag= ae
/standard_name= "Single nucleotide polymorphism (SNP)"
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                 replace (28987, T)
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10-OCT-2000; 2000US-00684390,
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Best Local Similarity 100.
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P-PSDB; AAE22853.
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                                                                                   This invention relates to a novel method for predicting gene potential by associating nucleic acid sequences of unknown function with particular sub-population profiles. Specifically, it refers to classifying an unknown multi-lineage affiliated gene by collecting hybridisation data to develop a gene expression map, in order to determine the discrete sub-compoundation where it is expressed. The present invention describes methods for predicting the lineage commitment of genes associated with the self-crenewing haematopoietic (blood) stem cells (HSCs), as well as the non-self renewing multipotent progenitors (CMPs), which are collectively referred to as bone marrow stem cells populations. As such, these methods can be used to identify associated multi-lineage affiliated genes and hence the underlying molecular mechanisms in physiological haematopoietic development. This polynucleotide sequence is DNA associated with a murine come sub population of cells of the invention.
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       gene potential; multi-lineage; cell commitment; haematopoietic stem cell; HSC; multipotent progenitor; MPP; common lymphoid progenitor; CLP; common myeloid progenitor; CMP; bone marrow stem cell; mouse; murine; ds.
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ive 0; Mismatches
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                                Claim 9; SEQ ID NO 1222; 123pp; English
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self renewing multipotent progenitors (MPPs), common lymphoid progenitors (CLPs) and common myeloid progenitors (CMPs), which are collectively referred to as bone marrow stem cells populations. As such, these methods can be used to identify associated multi-lineage affiliated genes and hence the underlying molecular mechanisms in physiological haematopoietic development. This polynucleotide sequence is DNA associated with a murine CMP sub population of cells of the invention.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     gene potential; multi-lineage; cell commitment; haematopoietic stem cell; HSC; multipotent progenitor; MPP; common lymphoid progenitor; CLP; common myeloid progenitor; CMP; bone marrow stem cell; mouse; murine; ds.
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IDENTITY NUC Gapop 10.0 , Gapext 1.0 Scoring table:

8780412 Total number of hits satisfying chosen parameters: 4390206 segs, 2959870667 residues Searched:

Minimum DB seq length: 0 Maximum DB seq length: 2000000000

Post-processing: Minimum Match 0% Maximum Match 100% Listing first 45 summaries

geneseqn2000s:* geneseqn2001as:* geneseqn2001bs:* geneseqn2002as:* geneseqn2003cs:* geneseqn2003ds:* geneseqn2003as:* geneseqn2003bs:* geneseqn2004bs: N_Geneseq_16Dec04:* geneseqn2004as geneseqn1980s:* **Database** :

Pred. No. is the number of results predicted by chance to have a score greater than or equal to the score of the result being printed, and is derived by analysis of the total score distribution.

| Description | Adh83346 Enterococ | Aca47564 Prokaryot | Adr52731 Drug ther | Aac51660 Arabidops | Aac46785 Arabidops | Adg63861 Novel hum | Ads60721 Bacterial | Aca27631 Prokaryot | Aav26084 Tomato pe | Abd33333 Murine ca | Abn21249 Human ORF | Adg20849 Human sof | Aaa65428 Porcine B | Adq24808 Human sof | Acc46307 Human dit | Adj56277 Human cDN | Achi5841 Human adu | Abl03599 Drosophil | Adq97563 Human can | Ads61254 Bacterial |
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| at a | ADH83346 | ACA47564 | ADR52731 | AAC51660 | AAC46785 | ADQ63861 | ADS60721 | ACA27631 | AAV26084 | ABD33333 | ABN21249 | ADQ20849 | AAA65428 | ADQ24808 | ACC46307 | ADJ56277 | ACH15841 | ABL03599 | ADQ97563 | ADS61254 |
| 08 | 10 | œ | 13 | m | m | 12 | 13 | æ | ~ | 13 | 9 | 12 | m | 12 | æ | 10 | σ | 4 | 12 | 13 |
| Length | 807 | 3211 | 127917 | 1533 | 1707 | 5978 | 845 | 2379 | 51952 | 66681 | 322 | 352 | 200 | 596 | 1308 | 3814 | 415 | 3303 | 79084 | 1030 |
| Match | 45.2 | 40.9 | 38.8 | 38.3 | 38.3 | 38.0 | 37.4 | 37.1 | 36.8 | 36.8 | 36.2 | 36.2 | 36.2 | 36.2 | 36.2 | 36.2 | 35.9 | 35.9 | 35.9 | 35.7 |
| Score | 31.2 | 28.2 | 26.8 | 26.4 | 26.4 | 26.2 | 25.8 | 25.6 | 25.4 | 25.4 | 25 | 25 | 25 | 25 | 25 | 25 | 24.8 | 24.8 | 24.8 | 24.6 |
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| 21 24.4 35.4 667 10 ACF6721 22 24.4 35.4 780 10 ACF67010 23 24.4 35.4 780 10 ACF67010 24 24.4 35.4 34264 8 AAL56706 2 24.4 35.4 110000 10 ACF6386-2 2 24.4 35.4 110000 11 ABD3267-26 2 29 24.2 35.1 72 5 ABS34119 -3 2 24.2 35.1 783 6 ABN70831 2 32 24.2 35.1 783 6 ABN70831 2 34 24.2 35.1 134 13 ABS46739 2 35 24.2 35.1 134 13 ABS46739 2 36 24.2 35.1 1134 13 ABS46739 2 37 24.2 35.1 1463 8 ABX72186 2 38 24.2 35.1 1463 8 ABX72186 2 39 24.2 35.1 1463 8 ABX72186 2 40 24.2 35.1 1961 10 ADC30717 2 41 24.2 35.1 1961 6 ABI3355 2 42 35.1 1246 8 ABX73216 2 43 24.2 35.1 1246 8 ABX72186 2 44 24.2 35.1 1246 8 ABX73187 2 45 25.1 1524 8 ABX73187 2 47 2 35.1 1246 8 ABX73187 2 48 24.2 35.1 1246 8 ABX73187 2 49 24.2 35.1 1246 8 ABX73187 2 41 24.2 35.1 12546 8 ABX73187 2 42 25.1 12546 8 ABX73187 2 43 24.2 35.1 12000 6 ABX71527 03 | Acf67221 Photorhab Acf67010 Photorhab Acf69663 Photorhab Ab123536 Drosophil | Aals6706 Cynomolgu Continuation (27 o Continuation (3 of Continuation (4 of | Aas34119 Human cDN Abn70831 Streptoco Abn67812 Streptoco Abn70413 Streptoco | Ada13386 Human Int Ads46739 Bacterial Adc13562 Human NOV Abx72187 Human NOV Abx72186 Human NOV Adc30717 Human nov Adc30717 Human nov | Ab132659 Human imm As63319 Chemicall Abt13955 Simian Vi As770122 Human imm Continuation (4 of Aba01732 Apple chl |
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| 10000000000000000000000000000000000000 | 667 1 780 1 1032 1 8372 4 | 34264 8 110000 1 110000 1 | -, | | 8451 6 8451 6 15246 8 22655 4 110000 6 |
| 00000000000000000000444444400000000000 | 35.4 35.4 | 35.4 35.4 35.4 | 35.1 35.1 35.1 | 35.1 35.1 35.1 35.1 35.1 | 35.1 35.1 35.1 34.8 |
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ALIGNMENTS

Enterococcus faecalis infection; transcription regulatory element; antibacterial; gene; ds. Enterococcus faecalis polynucleotide #1231. BB 98US-00134000. 97US-0055778P. ADH83346 standard; DNA; 807 (DOUC/) DOUCETTE-STAMM L A. (BUSH/) BUSH D. ä (first entry) Bush Enterococcus faecalis. WPI; 2003-895394/82. P-PSDB; ADH86751. Doucette-Stamm LA, 13-AUG-1998; 15-AUG-1997; 22-APR-2004 US6617156-B1 09-SEP-2003. ADH83346; ADH83346/c

New nucleic acid comprising a sequence encoding an Enterococcus fecalis polypeptide, useful for preparing a composition for diagnosing or treating E. fecalis infection.

Disclosure; SEQ ID NO 1231; 193pp; English.

The invention relates to Enterococcus faecalis polynucleotides and polypeptides. The invention also relates to a recombinant expression vector comprising a polynucleotide operably linked to a transcription regulatory element, a cell comprising a recombinant vector, a method for producing an B. faecalis polypebtide, an isolated nucleic acid comprising a sequence not given in the specification, a recombinant vector

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(1) a vector comprising a promoter operably linked to the nucleic acid encoding a polypeptide whose expression is inhibited by the antisense encoding a polypeptide whose expression is inhibited by the antisense polypeptide or its fragment whose expression is inhibited by the antisense nucleic acid; (4) an antibody capable of specifically binding the polypeptide; (5) producing the polypeptide; (6) inhibiting callular proliferation or the activity of a gene in an operon required for proliferation; (7) identifying a compound that influences the activity of
                                                                                                                                                                                                                                  New antisense nucleic acids, useful for identifying proteins or screening for homologous nucleic acids required for cellular proliferation to isolate candidate molecules for rational drug discovery programs.
comprising the nucleic acid and a cell comprising the recombinant vector. The polynucleotides can be used to detect the presence of E. faecalis in a sample. The sequences are useful for preparing a composition for diagnosing or treating Enterococus faecalis infection. This sequence
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                                                                                                                                                                                                               2 ATGCTAATACTGTAGGAGTTTCAATTTCAGGAGGTATCAGAACGGCTTTACTGGTAATA
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Xu HH;
                                                                                                                                                                              Gaps
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                                                                                                                                           Length 807;
                                                                     represents an E. faecalis polynucleotide of the invention.
                                                                                                        Sequence 807 BP; 295 A; 130 C; 145 G; 237 T; 0 U; 0 Other;
                                                                                                                                         45.2%; Score 31.2; DB 10; Length (66.2%; Pred. No. 0.24; ive 0; Mismatches 23; Indels
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Yamamoto R, Forsyth RA,
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Prokaryotic essential gene #29221
                                                                                                                                                                                                                                                                                                                                                                                                           ACA47564 standard; DNA; 3211 BP
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Carr GJ,
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06-SEP-2001; 2001US-0094893.
25-077-2001; 2001US-0342923P.
08-FEB-2002; 2002US-00072851.
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Trawick JD,
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P-PSDB; ABU43694.
                                                                                                                                         Query Match
Best Local Similarity
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the gene product or that has an activity against a biological pathway required for proliferation, or that inhibits cellular proliferation; (8) identifying a gene required for cellular proliferation or the biological pathway in which a proliferation-required gene or its gene product lies or a gene on which the test compound that inhibits proliferation of an organism acts; (9) manufacturing an antibiotic; (10) profiling a compound's activity; (11) a culture comprising strains in which the gene product is overexpressed or underexpressed; (12) determining the extent or product is overexpressed or underexpressed; (12) determining the extent to which each of the strains is present in a culture or collection of strains; or (13) identifying the target of a compound that inhibits the proliferation of an organism. The antisense nucleic acids are useful for identifying proteins or screening for homologous nucleic acids required for proliferation to isolate candidate molecules for rational drug discovery programs, or for screening homologous nucleic acids required for proliferation in cells other than S. aureus, S. typhimurium, K. pneumoniae or P. aeruginosa. The present sequence is one of the target nor form part of the printed specification, but was obtained in the print of the printed specification, but was obtained in
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             drug activity monitoring; expression profile; gene expression; peripheral blood sample; peripheral blood mononuclear cell; drug therapy; CCI-779; immunosuppressant; rapamycin; mammalian target of rapamycin;
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  2 ATGCTAATACTGTAGGAGTTTCAATTTCAGCAGGGTATCAGAACGGCTTTACTGGTAATA
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                                                                                                                                                                                                                                                                                                                                                                                                                            40.9%; Score 28.2; DB 8; Length 3211;
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                23; Indels
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03-APR-2003; 2003US-0459782P.
23-JAN-2004; 2004US-0538246P.
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                                                                                                                                                                                                                                                                                                                                                                                                                                                 64.68;
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Matches 42; Conservative
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BURCZYNSKI M.
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(DORN/)
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30-APR-1999;
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11-MAY-1999;
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  by comparing an expression profile of at least one gene in a peripheral blood sample of a patient to a reference expression profile of the at least one gene, where the at least one gene is differentially expressed in peripheral blood monomuclear cells (PBMCs) of patients who have a nonblood disease and are subjected to a drug therapy as compared to PBMCs isolated from the patient before the drug therapy, and where the patient has the non-blood disease and is being treated by the drug therapy. The method, kit, and nucleic acid array are useful for monitoring drug activities in vivo. The drug is especially CCI-779, an ester analogue of the immunosuppressant rapamycin which is a potent inhibitor of the cammalian target of rapamycin (MTOR). This sequence represents a gene expressed in PBMC altered by the drug therapy. (Note: this sequence does no form part of the printed specification but was obtained in electronic format from WIPO at ftp.wipo.int/pub/published_pct_sequences/).
                                                                                                                                                                                                                                                                                                                                   114718 GATGCAAATACTGCAGGACCTGAACATCCAGGAGGCTTCACTGCTGCTTCCCAGCAAAG 114659
                                                                                                                                                                                                                                                                                                               1 GATGCTAATACTGTAGGAGTTTCAATTTCAGCAGGTATCAGAACGGCTTTACTGGTAAT 60
                                                                The invention relates to a method of monitoring drug activities in vivo
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Hybridisation assay; genetic mapping; gene expression control; protein identification; signal transduction pathway; metabolic pathway;
Monitoring drug activities in vivo comprises comparing an expression profile of a gene in a peripheral blood sample of a patient before and after drug therapy.
                                                                                                                                                                                                                                           Sequence 127917 BP; 35803 A; 28668 C; 28463 G; 34983 T; 0 U; 0 Other;
                                                                                                                                                                                                                                                                                        0; Gaps
                                                                                                                                                                                                                                                                / Match 38.8%; Score 26.8; DB 13; Length 127917; Local Similarity 64.5%; Pred. No. 33; no 40; Conservative 0; Mismatches 22; Indels 0; C
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Arabidopsis thaliana DNA fragment SEQ ID NO: 69324.
                                          Disclosure; SEQ ID NO 82; 136pp; English
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  promoter; termination sequence; ss
                                                                                                                                                                                                                                                                                                                                                                                                                                      AAC51660 standard; DNA; 1533 BP
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9905-0123548P-
9905-0126264P-
9905-0126264P-
9905-0126242P-
9905-0128234P-
9905-0128714P-
9905-013845P-
9905-013047P-
9905-0130449P-
9905-0130449P-
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09-MAR-1999;
23-MAR-1999;
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29-MAR-1999;
01-APR-1999;
06-APR-1999;
08-APR-1999;
16-APR-1999;
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9905-0145193P
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9905-0145218P
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9905-0147204P
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9905-0147303P
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9905-0149358P
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9905-0151080P
99US-0144814P
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07-0CT-1999
08-0CT-1999
12-0CT-1999
13-0CT-1999
13-0CT-1999
13-0CT-1999
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23-AUG-1999;
23-AUG-1999;
25-AUG-1999;
27-AUG-1999;
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31-AUG-1999;
31-AUG-1999;
31-AUG-1999;
01-SEP-1999;
07-SEP-1999;
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27.7UL-1999
27.7UL-1999
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28.7UL-1999
02.AUG-1999
03.AUG-1999
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06.AUG-1999
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11.AUG-1999
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24-SEP-1999;
28-SEP-1999;
29-SEP-1999;
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20-AUG-1999;
20-AUG-1999;
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15-SEP-1999;
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Hybridisation assay; genetic mapping; gene expression control; protein identification; signal transduction pathway; metabolic pathway; promoter; termination sequence; ss.
                                                                                                                                                               TGCTAATACTGTAGGAGTTTCAATTTCAGCAGGTATCAGAACGGCTTTACTGGTAATAT
                                                                                                                                                   Gaps
                                                                                                                                                  0;
                                                                                                                                      DB 3; Length 1533;
                                                                                                                                                  Indels
                                                                                                                                                                                                                                                 Arabidopsis thaliana DNA fragment SEQ ID NO: 51395.
                                                                                                                                     Score 26.4; DE; Pred. No. 16; 0; Mismatches
                                                                                                                                                                                             990S-0159584P.
990S-0160741P.
990S-0160767P.
990S-0160710P.
990S-0160814P.
990S-0160981P.
990S-0160980P.
990S-0161980P.
990S-0161406P.
990S-0161406P.
990S-0161361P.
990S-0161361P.
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990S-0161361P.
990S-0161920P.
                                                                                                                                      38.3%;
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c Local Similarity 65.v»,
האהפ 39; Conservative
      21-0CT-1999)
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| 9US-0132863P 9US-013425B 9US-013421BP 9US-013421P 9US-013421P 9US-0134321P 9US-0134321P 9US-013523P 9US-013523P 9US-013533P 9US-013533P 9US-013533P 9US-013533P 9US-013533P | 905 - 013 / 724 905 - 013 / 724 905 - 013 / 724 905 - 013 80 905 - 013 80 905 - 013 90 905 - 014 90 90 905 - 014 90 90 905 - 014 90 90 905 - 014 90 90 905 - 014 90 90 905 - 014 90 90 905 - 014 90 90 905 - 014 90 90 90 90 90 90 90 90 90 90 90 90 90 | 99US-0140921P. 99US-0140921P. 99US-0141842P. 99US-0142184P. 99US-0142154P. 99US-0142154P. 99US-0142154P. 99US-014230P. 99US-014320P. 99US-0144085P. 99US-0144086P. 99US-0144086P. 99US-0144086P. 99US-0144086P. 99US-0144086P. 99US-0144132P. 99US-0144332P. 99US-0144332P. 99US-0144814P. |
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| 07 - MAY - 1999 11 - MAY - 1999 14 - MAY - 1999 14 - MAY - 1999 14 - MAY - 1999 19 - MAY - 1999 20 - MAY - 1999 21 - MAY - 1999 25 - MAY - 1999 25 - MAY - 1999 28 - MAY - 1999 01 - JUN - 1999 | 0. 0. 0. 0. 0. 0. 0. 0. 0. 0. 0. 0. 0. 0 | PR 28-JUN-1999; PR 29-JUN-1999; PR 30-JUN-1999; PR 01-JUL-1999; PR 02-JUL-1999; PR 06-JUL-1999; PR 06-JUL-1999; PR 13-JUL-1999; PR 13-JUL-1999; PR 14-JUL-1999; PR 15-JUL-1999; PR 15-JUL-1999; PR 16-JUL-1999; PR 19-JUL-1999; PR 19-JUL-1999; PR 19-JUL-1999; PR 19-JUL-1999; PR 20-JUL-1999; PR 21-JUL-1999; PR 22-JUL-1999; |

PR 23-JUL-1999; 99US-0145145P
PR 23-JUL-1999; 99US-0145524P
PR 24-JUL-1999; 99US-0145524P
PR 26-JUL-1999; 99US-0145524P
PR 27-JUL-1999; 99US-0145518P
PR 27-JUL-1999; 99US-0145518P
PR 27-JUL-1999; 99US-0145518P
PR 27-JUL-1999; 99US-0145518P
PR 02-AUG-1999; 99US-0145518P
PR 02-AUG-1999; 99US-0145318P
PR 02-AUG-1999; 99US-0147302P
PR 02-AUG-1999; 99US-0147302P
PR 02-AUG-1999; 99US-0147302P
PR 03-AUG-1999; 99US-0147302P
PR 03-AUG-1999; 99US-0147302P
PR 13-AUG-1999; 99US-0147302P
PR 13-AUG-1999; 99US-0147302P
PR 13-AUG-1999; 99US-0147302P
PR 13-AUG-1999; 99US-0147302P
PR 20-AUG-1999; 99US-0149722P
PR 21-SEP-1999; 99US-0149722P
PR 21-SEP-1999; 99US-0149722P
PR 21-SEP-1999; 99US-0149772P
PR 21-SEP-1999; 99US-015606P
PR 21-SEP-1999; 99US-0156078P
PR 21-SEP-19

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                                                                                                                                                                                                                                                                            532
                                                                                                                                                                                                                                                                                                                                                                                                                                                         ss; gene; osteopathic; neuroprotective; nootropic; antiparkinsonian; cytostatic; gene therapy; diagnostic marker; morbid state; osteoporosis; neurological disease; Alzheimer's disease; Parkinson's disease; dementia;
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Alzheimer's diseases, Parkinson's diseases, dementia and various cancers
                                                                                                                                                                                                                                                  3 IGCIAATACTGTAGGAGTTTCAATTTCAGCAGGGTATCAGAACGGCTTTACTGGTAATAT
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                                                                                                                                                                                          Score 26.4; DB 3; Length 1707; Pred. No. 17;
                                                                                                                                                                                                                       21; Indels
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Wakamatsu A,
                                                                                                                                                                                 38.3%; Scor. 65.0%; Pred. No. 1,,
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Otsuki T, Wakami
Nagai K, Irie R;
                                                                                                                                                                                                                                                                                                                                                 ADQ63861 standard; cDNA; 5978 BP
                                                                                                                                                                                                                                                                                                                                                                                                                                 Novel human cDNA sequence #1022.
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          99US-0160981P.
99US-0160989P.
99US-0161404P.
99US-0161405P.
99US-0161359P.
99US-0161350P.
99US-0161350P.
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                                                                                                                                                   99US-0161993P.
99US-0162142P.
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99US-0160980P
                                                                                                                                    99US-0161992P
                                                                                                                                                                                                                                                                                                                                                                                                       (first entry)
                                                                                                                                                                                                                     39; Conservative
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                                                                                                                                                                                                          Local Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     P-PSDB; ADQ66049
                                                   25-OCT-1999;
25-OCT-1999;
26-OCT-1999;
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                                        16661
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                                                                                            26-0CT-1999;
26-0CT-1999;
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                         22-OCT-1999
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                                                                                                                                                                                              Query Match
                                      25-OCT-1
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Sequence 5978 BP; 1691 A; 1343 C; 1230 G; 1714 T; 0 U; 0 Other;

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The invention relates to a recombinant DNA construct comprising a promoter functional in a plant cell, where the promoter is positioned to promoter functional in a plant cell, where the promoter is positioned to promotery expression of a polymothecide encoding a polypeptide from a microbial source. The invention also relates to a transformed plant comprising the recombinant DNA construct and a method of producing a transformed plant with the such as maize or soybean. The method of producing a plant with the such as maize or soybean. The method of producing a plant with the having an improved property comprises transformed plant, where the polymucleotide or polypeptide is useful for improving plant properties. The recombinant DNA construct is useful for improving plants with the improved plant properties, e.g. improved cold, heat or drought tolerance, colerance to herbicides, extreme osmotic conditions, pathogens or pests, increased resistance to plant disease, better growth rate by modification of the cell cycle pathway with plant growth requlators, increased rate of
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                                                                                                      4304 GCTACAGTCTTAGAATTACAATTTCATGAGGAACTGGCAATGGATATTAAGGTAATATC 4245
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       New recombinant DNA construct comprising a promoter positioned to provide for expression of a polynucleotide encoding a polypeptide from a microbial source, useful for producing plants with improved properties.
                                                                       63
                                                                                                                                                                                                                                                                                                                                                                                                                     cold tolerance, heat tolerance; drought tolerance; herbicide; osmosis; pathogen tolerance; pest tolerance; plant disease resistance; cell cycle pathway medification; plant growth regulator; homologous recombination; seed oil yield; protein yield; carbohydrate; nitrogen; phosphorus; photosynthesis; lignin; galactomannan; bacterial polynucleotide; gene; ss.
                                                                                                                                                                                                                                                                                                                                                                                                          Recombinant DNA construct; transformed plant; improved plant property;
                                                                       GCTAATACTGTAGGAGTTTCAATTTCAGCAGGGTATCAGAACGGCTTTACTGGTAATATC
                                      Gaps
                                  ;
 Length 5978;
                                      Indels
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                                  23;
   DB 12;
Score 26.2; DE
Pred. No. 27;
0; Mismatches
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                                                                                                                                                                                                                                                                   BP.
                                                                                                                                                                                                                                                                                                                                                                         Bacterial polynucleotide #12708.
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                                                                                                                                                                                                                                                                     ADS60721 standard; cDNA; 845
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              21-FEB-2002; 2002US-0360039P.
 38.0%;
63.5%;
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                                      Conservative
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HINKLE G J.
SLATER S C.
CHEN X.
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                    Similarity
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                                                                                                                                            64 ACT 66
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   Query Match
Best Local Simi
Matches 40;
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(CHEN/)
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homologous recombination, modified seed oil or protein yield and/or content, improved yield by modification of carbohydrate, nitrogen or phosphorus use and/or uptake, by modification of photosynthesis or by providing improved plant growth and development under at least one stress condition, improved lignin production or improved galactomannan production. This sequence represents a bacterial polymucleotide used in the scope of the invention. Note: The sequence data for this patent did not form part of the printed specification but was obtained in electronic format from USPTO at seqdata.uspto.gov/sequence.html.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 New antisense nucleic acids, useful for identifying proteins or screening for homologous nucleic acids required for cellular proliferation to isolate candidate molecules for rational drug discovery programs.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    the 6213 antisense sequences given in the specification where expression of the nucleic acid inhibits proliferation of a cell. Also included are:
11 a vector comprising a promoter operably linked to the nucleic acid encoding a polypeptide whose expression is inhibited by the antisense nucleic acid, (2) a host cell containing the vector; (3) an isolated polypeptide or its fragment whose expression is inhibited by the antisense nucleic acid, (4) an antibody capable of specifically binding the polypeptide; (5) producing the polypeptide; (6) inhibiting cellular proliferation or the activity of a gene in an operon required for proliferation; (7) identifying a compound that influences the activity of
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      The invention relates to an isolated nucleic acid comprising any one of
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Zyskind JW;
Xu HH;
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                                                                                                                                                                                                                          Match 37.4%; Score 25.8; DB 13; Length 845; Local Similarity 73.3%; Pred. No. 24; les 33; Conservative 0; Mismatches 12; Indels 0
                                                                                                                                                                                              Sequence 845 BP; 225 A; 217 C; 214 G; 189 T; 0 U; 0 Other;
                                                                                                                                                                                                                                                                                                                                         611 GATGCCAATGCTGTAGTGTCTGTTTAATCCGTGGATCAGAGC 567
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Forsyth RA,
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Yamamoto R,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Claim 14; SEQ ID NO 15501; 1766pp; English.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                essential gene #9288
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Carr GJ,
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06-SEP-2001; 2001US-0094893.
25-0CT-2001; 2001US-0342923P.
08-PEB-2002; 2002US-0072851.
06-MAR-2002; 2002US-0362699P.
                                                                                                                                                                                                                                                                                                                                                                                                                         ACA27631/c
ID ACA27631 standard; DNA; 2379
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Clostridium acetobutylicum.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        (first entry)
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Zamudio C,
Trawick JD,
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        drug design; gene
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Prokaryotic
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                                                                                                                                                                                                                                  Query Match
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                                                                                                                                                                                                                                                                                             proliferation of an organism. The antisense nucleic acids are useful for identifying proteins or screening for homologous nucleic acids are useful for callular proliferation to isolate candidate molecules for rational drug discovery programs, or for screening homologous nucleic acids required for proliferation in cells other than S. aureus, S. typhimurium, R. pneumoniae or P. aeruginosa. The present sequence is one of the target not form part of the printed specification, but was obtained in electronic format directly from WIPO at
the gene product or that has an activity against a biological pathway required for proliferation, or that inhibits cellular proliferation; (8) identifying a gene required for cellular proliferation or the biological pathway in which a proliferation-required gene or its gene product lies or a gene on which the test compound that inhibits proliferation of an organism acts; (9) manufacturing an antibiotic; (10) profiling a compound's activity; (11) a culture comprising strains in which the gene product is overexpressed or underexpressed; (12) determining the extent to which each of the strains is present in a culture or collection of strains; or (13) identifying the target of a compound that inhibits the
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            /note= "copy 2 promoter; specifically claimed in nucleic acid construct of Claim 9" 16084. .19932
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      1916 GTAGGATTTTCGCTTTCACGAGCATATGAAATCTTGTTGACTCCTAAAATCTCCAC 1861
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 13 GTAGGAGTTTCAATTTCAGCAGGGTATCAGAACGGCTTTACTGGTAATATCACTAC 68
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Pest resistance; nematode resistance; disease resistance; Mi gene;
tomato; transgenic plant; crop protection; biological control; ss.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Williamson VM, Kaloshian I, Yaghoobi J, Bodeau J, Milligan S;
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"Mi gene (copy 1); encodes AAW55974"
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.44461
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Pred. No. 36;
0; Mismatches 19; Indels
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       electronic format directly from WIPO at ftp.wipo.int/pub/published_pct_sequences
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Tomato pest resistance Mi gene (copy 1).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Location/Qualifiers
10071. .14691
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42798.
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      요
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nematode resistance, obtained from a bacterial artificial chromosome (BAC). Mi was localised by genetic analysis to a region of the tomato genome of about 65 kb. DNA corresponding to this region was cloned into BAC vectors. Sequence analysis of a 52 kb BAC3 insert identified 3 open reading frames, one of which is probably a pseudogene. By RNA blot analysis, transcripts of approximately 4 kb corresponding to copy 1 and copy 2 were found in both resistant and susceptible tomato roots and in leaves of resistant but not susceptible plants. CDNA sequences corresponding to full-length transcripts of copy 1 (see. ANV26082) and copy 2 (see AAV26083) were obtained. The encoded polypeptides (see AAW56083) are 91% identical and contain structural features similar to
                                                                                                                                                                                                                                                                                                                                                                                                                                               known plant resistance genes (R genes) of the nucleotide binding site/leucine-rich repeat (NBS/LRR) family. A recombinant expression cassette comprising an Mi polynucleotide and an operably linked plant promoter can be used to enhance nematode resistance in plants especially tomatoes
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                (claimed). Transgenic plants can also be constructed using a Mi promoter with heterologous genes; the Mi promoters can be used to express a variety of genes in the same temporal and spatial patterns and at similar
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     6714 GGTGATAGTAATTCTGGAGTTGCAGGGTCAAAAGGGTATCAGCAGAACTTGAAA 6772
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Mouse; cancer-associated protein; CAP; cancer-associated gene; CA; gene;
                                                                        Nucleic acids encoding Mi polypeptide(s) conferring nematode resistance useful to produce transgenic plants resistant to these and other pests, and in marker-aided selection to assess cultivars for resistance.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Novel human cancer associated protein encoded within open reading frame of cancer associated gene, useful as targets for diagnosing cancer.
                                                                                                                                                                                                    This is the nucleotide sequence of the tomato Mi locus associated with
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              1 GATGCTAATACTGTAGGAGTTTCAATTTCAGCAGGGTATCAGAACGGCTTTACTGGTAA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Sequence 51952 BP; 17728 A; 8444 C; 8647 G; 17111 T; 0 U; 22 Other;
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      0; Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Score 25.4; I
Pred. No. 87;
                                                                                                                                                              Claim 11; Page 24-39; 55pp; English
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       ABD33333 standard; DNA; 66681 BP
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                 WPI; 1998-240529/21.
P-PSDB; AAW55974, AAW55975.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    levels to resistance genes
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associated (CA) nucleic acids encoding them. The invention also relates to a method for treating cancers involving administering to a patient an inhibitor of CAP, and a method of screening for anticancer activity in a potential drug involving providing a cell that expresses a CA gene, contacting a tissue sample derived from a cancer cell with an anticancer drug candidate and monitoring the effect of the anticancer drug candidate and monitoring the RP proteins are useful for detecting cancer associated with expression of a CAP protein in a test cell sample and for screening for a bloactive agent capable of modulating the activity of a CAP protein. The CA nucleic acids are useful for diagnosing cancer, involving determining the expression of a CA nucleic acid in a tissue. This sequence represents a murine CA gene of the invention. Note: The sequence data for this patent did not form part of the printed specification, but was obtained in electronic format directly from WIPO
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     7130 rgarrrrgraddagrrrcrggrcagrcagraddagragcaagccarcrrcaraggrcaccrca 7188
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  64
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Sequence 66681 BP; 15710 A; 15622 C; 17256 G; 18047 T; 0 U; 46 Other;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        0; Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  6 TAATACTGTAGGAGTTTCAATTTCAGCAGGGTATCAGAACGGCTTTACTGGTAATATCA
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                                                                                                         invention relates to cancer-associated proteins (CAP) and the
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              DB 13; Length 66681;
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      at ftp.wipo.int/pub/published_pct_sequences
                                   Disclosure; SEQ ID NO 411; 182pp; English.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Score 25.4;
Pred. No. 92
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29-AUG-2000; 2000US-0228716P.
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             myasthenia gravis; gene; ss
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        24-JUN-2002 (first entry)
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Best Local Similarity 64.4*
Matches 38; Conservative
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Disclosure; SEQ ID NO 10975; 1037pp; English.

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us-10-780-250-4.rng

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The present invention describes substantially purified human proteins (referred to as open reading frame, ORFX, where X is 1-11491 (see Table 1 in the specification). ABN15762 to ABN2752 encode the human ORFX proteins given in ABP00010 to ABN15705.

Treating or preventing a pathology associated with an ORFX-associated disorder. ORFX proteins are useful for clasured in humans, and in the manufacture of a medicament for treating a syndrome associated with ORFX-associated disorder. ORFX polynucleotide syndrome associated with ORFX-associated disorder. ORFX polynucleotide correctment of cancer, hyperproliferative disorders, cirrhosis of liver, psoriasis, benign tumours, keloid, degenerative disorders can be used in the transplantation, cardiovascular diseases, disorders related to organizance of seases, hypertension, hypothyroidism, cholesterol ester curansplantation, cardiovascular diseases, disorders related to organizance diseases, autoimmune deficiencies and disorders, infectious diseases, autoimmune thyroiditis, mysthenia gravis, graft-versus-host diseases, autoimmune thyroiditis, mysthenia gravis, graft-versus-host diseases and autoimmune thyroiditis, mysthenia gravis, graft-versus-host diseases and autoimmune thyroiditis, mysthenia gravis, graft-versus-host disease and autoimmune thyroiditis, unders, for treating osteoporosis, bone degenerative disorders, or periodontal disease, and for gut protection or regeneration and treatment of lung or liver fibrosis, reperfusion injury in various tissues and conditions resulting from reperfusion injury in various tissues and conditions resulting from cycokine damage. NB. The sequence data for this patent did not form with a size of the printed specification, but was obtained in electronic
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     directly from WIPO at ftp.wipo.int/pub/published_pct_sequences
X335555555555555555555555555555555
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Gaps ; 36.2%; Score 25; DB 6; Length 322; 75.6%; Pred. No. 38; Indels Sequence 322 BP; 91 A; 82 C; 60 G; 89 T; 0 U; 0 Other; 28 TCAGCAGGGTATCAGAACGGCTTTACTGGTAATATCACTAC 68 10; 0; Mismatches Pred. No. 75.6%; Local Similarity 75.6 nes 31; Conservative Query Match Best Loca Matches

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ADQ20849 standard; DNA; 352 BP. (first entry) 26-AUG-2004 ADQ20849; ADQ20849

soft tissue sarcoma; cytostatic; gene therapy; vaccine; screening; human; Human soft tissue sarcoma-upregulated DNA - SEQ ID 3669.

Homo sapiens.

WO2004048938-A2.

10-JUN-2004.

26-NOV-2003; 2003WO-US038193.

(PROT-) PROTEIN DESIGN LABS INC.

26-NOV-2002; 2002US-0429739P.

Zlotnik A; Aziz N, Ginsburg WM,

WPI; 2004-441208/41.

Early detection of soft tissue sarcoma comprises determining expression of a gene in a first soft tissue sample and a normal soft tissue sample and comparing the gene expression, also useful in treating soft tissue

Example 2; SEQ ID NO 3669; 210pp; English.

The invention relates to a novel method for detecting soft tissue sarcoma which comprises obtaining a first soft tissue sample from an individual and a normal soft tissue sample from the same or different individual, determining the expression of a gene in both samples and comparing the expression of the gene in both soft tissue samples, where a higher level of protein expression in the first soft tissue sample indicates the presence of soft tissue sarcoma. The method of the invention has cytostatic applications and may be useful for detecting soft tissue sarcoma, possibly via gene therapy or vaccine production. The nucleic scarcoma, possibly via gene therapy or vaccine production. The nucleic acid sequences may be useful in diagnostic and screening applications. The current sequence is that of a human soft tissue sarcoma-upregulated bNA of the invention. The current sequence is not shown within the specification per se but was submitted in CD format by the inventor. 88888888888888888

Sequence 352 BP; 98 A; 57 C; 53 G; 144 T; 0 U; 0 Other;

. 0 DB 12; Length 352; 20; Indels Score 25; DB 1 Pred. No. 38; 0; Mismatches 36.2%; Conservative Query Match Best Local Similarity 37; Matches

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12 TGTAGGAGTTTCAATTTCAGCAGGGTATCAGAACGGCTTTACTGGTAATATCACTAC 68 ò 셤

428/c AAA65428 Btandard; DNA; 500 RESULT 13

BP

10-NOV-2000 (first entry)

AAA65428;

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Porcine BAC-PIGF2-1 contig 19.

Porcine; pig; wild boar; quantitative trait locus; QTL; chromosome 2; mapping; $2p\bar{1}.7$; select breeding; genotype; phenotype; muscle mass; fat deposition; IGF2; insulin-like growth factor 2; ds.

Sus scrofa.

WO200036143-A2.

22-JUN-2000.

99WO-EP010209. 16-DEC-1999; 98EP-00204291 (UYLI-) UNIV LIEGE. MELICA HB 16-DEC-1998;

Spincemaille G; Georges M, (SEGH-) SEGHERSGENTEC NV. Andersson L,

WPI; 2000-431612/37.

comprises testing the animal for the presence of a parentally imprinted quantitative trait locus which is related to muscle mass and/or fat Selecting a domestic animal for having desired genotypic properties

Example 3; Fig 6; 107pp; English.

deposition.

The present invention describes a method (M1) for selecting a domestic animal for having desired genotypic properties. The method comprises testing the animal for the presence of a parentally imprinted quantitative trait locus (QTL). The pig QTL is located at chromosome 2, mapping at around position 2pl.7. Also described are: (1) an isolated and/or recombinant nucleic acid (N1) comprising a parentally imprinted QTL or its functional fragment; (2) an isolated and/or recombinant nucleic acid (N2) comprising a synthetic parentally imprinted QTL or its functional fragment; (3) an animal AAA65428/C

ID AAA65

AC AAA65

MXX AAA65

MXX IO-NC

MXW Mappi

MXW Mappi

MXW MO200

MXX IO-Di

MYX IO-Di

M

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properties; (4) a transgenic animal comprising N1 or N2; and (5) sperm or an embryo derived from the animal comprising N1 or N2; and (5) sperm or useful for selecting an animal of (3) or (4). N1 or its fragment is useful for selecting an animal of or slaughter or a breeding animal having desired genotypic or potential phenotypic properties. The properties are related to muscle mass and/or fat deposition. The sperm or an embryo are useful in breeding animals destined for slaughter. AAA65418 to AAA6554 represent contigs 1 to 10 and 19 to 115 which were isolated from porcine BAC-PIGFD-1 which contains the INS and IGF2 (insulin-like growth factor) genes. These sequences where used in an example from the present invention for generating a reference sequence of IGF2 and
                                                                                                                                                                                                                                                                                                                                                     flanking loci in the pig
               8$8666666666688
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GATTCTATGTCTGTATGTGCAAAGTGATCACGACAGCAGGTCGGGTTAACTTTCATT 370 GATGCTAATACTGTAGGAGTTTTCAATTTCAGCAGGGTATCAGAACGGCTTTACTGGTAAT Gaps . Score 25; DB 3; Length 500; Pred. No. 42; Sequence 500 BP; 163 A; 115 C; 132 G; 90 T; 0 U; 0 Other; 25; Indels 0; Mismatches 36.2%; 61.5%; 40; Conservative Query Match Best Local Similarity 369 TCCAC 365 61 ATCAC 65 Н 429 Matches

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Human soft tissue sarcoma-upregulated DNA - SEQ ID 7628. ADQ24808 standard; DNA; 596 BP. (first entry) 26-AUG-2004 ADQ24808; RESULT 14 ADQ24808 ID ADQ

soft tissue sarcoma; cytostatic; gene therapy; vaccine; screening; human; sapiens. Homo

26-NOV-2002; 2002US-0429739P. 26-NOV-2003; 2003WO-US038193 WO2004048938-A2 10-JUN-2004

Zlotnik A; (PROT-) PROTEIN DESIGN LABS INC Aziz N, Ginsburg WM,

WPI; 2004-441208/41.

The invention relates to a novel method for detecting soft tissue sarcoma which comprises obtaining a first soft tissue sample from an individual and a normal soft tissue sample from the same or different individual, determining the expression of a gene in both samples and comparing the expression of the gene in both soft tissue samples, where a higher level of protein expression in the first soft tissue sample indicates the presence of soft tissue sarcom the invention has cytostatic applications and may be useful for detecting soft tissue sarcoma, possibly via gene therapy or vaccine production. The nucleic Early detection of soft tissue sarcoma comprises determining expression of a gene in a first soft tissue sample and a normal soft tissue sample and comparing the gene expression, also useful in treating soft tissue Example 2; SEQ ID NO 7628; 210pp; English. ватсоша

ö acid sequences may be useful in diagnostic and screening applications. The current sequence is that of a human soft tissue sarcoma-upregulated DNA of the invention. The current sequence is not shown within the specification per se but was submitted in CD format by the inventor. rrradgrrrrrrrangangargrcrracaacrarrrrccrrrrarracacrac 12 IGTAGGAGTITICAATITICAGCAGGTATCAGAACGGCTITACTGGTAATATCACTAC 68 0; Gaps DB 12; Length 596; Sequence 596 BP; 158 A; 112 C; 105 G; 221 T; 0 U; 0 Other; 20; Indels 0; Mismatches 43; Score 25; Pred. No. 4 Query Match
Best Local Similarity 64.9%;
Matches 37; Conservative (102 8888888ò a

BP.

ACC46307 standard; cDNA; 1308

RESULT 15 ACC46307/

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02-JUN-2003 (first entry)

ACC46307;

Human; dithp; diagnostic and therapeutic polynucleotide; diagnosis; cancer; cell proliferative disorder; autoimmune disorder; inflammatory disorder; infection; hormonal disorder; metabolic disorder; neurological disorder; anstetion; hormonal disorder; transport disorder; connective tissue disorder; drug screening; proteome analysis; gene therapy; antisense therapy; genotyping; transgenic animal; knock in; transcription factor; gene; ss. Human dithp transcription factor-encoding cDNA. Homo sapiens.

2001US-0280067P. 2001US-0280068P. 2001US-0291809P. 2001US-0291849P. 2001US-0299428P. 27-MAR-2002; 2002WO-US010056 2001US-0279619P 20-JUN-2001; 2001US-0300001P WO200297031-A2. 16-MAY-2001; 17-MAY-2001; 17-MAY-2001; 19-JUN-2001; 28-MAR-2001; 29-MAR-2001; 29-MAR-2001; 20-JUN-2001; 05-DEC-2002

ones AL, Tran AB, Dahl CR, Gietzen D, Chinn J;
Hillman JL, Yu JY, Tuason O, Yap PE, Amshey SR;
J. Dam TC, Liu TF, Nguyen DA, Kleefeld Y, Gerstin EH;
David MH, Lewis SA, Chen AJ, Panzer SR, Harris B; Lewis SA, Chen AJ, Panze Lo A, Lan RY, Urashka ME; Jones AL, Tran AB, Daughtery SC, Dam TC, Peralta CH, David MH, Flores V, Marwaha R, Dafto a, Dufour GB, Hill Daffo A,

(INCY-) INCYTE GENOMICS INC.

WPI; 2003-129518/12. P-PSDB; ABR41367.

Novel human diagnostic and therapeutic polypeptide useful for identifying test compound which specifically binds to a polypeptide encoded by human diagnostic and therapeutic polynucleotide, and to induce antibodies.

Claim 2; SEQ ID NO 228; 591pp; English.

The invention relates to novel human diagnostic and therapeutic polynuclectides designated dithp (ACC46080-ACC46749) and to their encoded proteins (DITHP; ABR41136-ABR41812). The invention also relates to

cc polynucleotide sequences at least 90% identical to the dithp cDNA sequences of the invention; recombinant vectors, host cells and transgenic organisms comprising a dithp nucleic acid sequence; the recombinant production of DITHP proteins; antibodies specific for DITHP proteins; antibodies specific for DITHP proteins matcheds of exceening detecting dithp nucleotide and protein sequences, methods of assessing the toxicity of test compounds using a dithp hybridisation for compounds which specifically bind a DITHP protein; and methods of assessing the toxicity of test compounds using a dithp hybridisation probe. Dithp nucleic acid sequences and DITHP proteins may be used in the diagnosis of a wide variety of conditions including cancer and other cell proliferative disorders; autoimmune or inflammatory disorders; bacterial, viral, fungal or parasitic infections; hormonal disorders; bacterial, viral, fungal or parasitic infections; hormonal disorders; bacterial, viral, fungal or parasitic infections; promonal disorders; transport disorders; and connective tissue disorders. They may also be used to screen for modulators of protein activity or gene expression. DITHP proteins can additionally be used in analysis of the protecome of a tissue or cell type and to induce antibodies. The dithp nucleic acids are proteins can additionally useful in somatic or germline gene therapy of the disorders mentioned above, as a source of antisense sequences, as a source of probes and primers, in genotyping and identification of individuals, in toxicological testing, and in transcripting mannised animals, in toxicological testing, and in transcripting mannised animals, in toxicological testing, and in transcripting protein when the present sequence represents a dithp cDNA encoding a DITHP protein when the patent did not form part of the printing specification, but was obtained to patent did not form part of the printing specification, but was obtained in electronic format directly from WIPO at Sequence 1308 BP; 409 A; 264 C; 264 G; 371 T; 0 U; 0 Other; \$

0; Gaps Query Match
36.2%; Score 25; DB 8; Length 1308;
Best Local Similarity 64.9%; Pred. No. 52;
Matches 37; Conservative 0; Mismatches 20; Indels ઠે g

Search completed: November 20, 2005, 07:07:16 Job time : 286 secs

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BX702860 XGC-tadpole Xenopus tropicalis cDNA clone TTpA022d21 3', mRNA sequence.
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/clone llb="XGC-tadpole"
/note="Vector: pCS107; Site_1: EcoRI; Site_2: NotI; cDNA
was oligo dT primed from Sug of poly A+ RNA from tadpole
embryos. EcoRI-NotI cut cDNA was then ligated into pCS107
with EcoRI at the 5' end and NotI at the 3' end"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Contact: Croning MDR
Sanger Institute
Hinxton, Cambridgeshire, CB10 1SA, UK
Enail: trop@sanger.ac.uk
Sanger Xenopus tropicalis EST project 2001
TROPICALIS ESQUENCE ID: TTPA022421.qlkT7
Sequencing primer: T7
This sequence is from a Xenopus Gene Collection (XGC) library
constructed by Nigel Garrett.
cDNA was oligo dT primed from Sug of poly A+ RNA from tadpole
embryos. EcoRI-NotI cut cDNA was then ligated into pCS107 with
EcoRI at the 5' end and NotI at the 3' end.
Vector: pCS107; Site 1: EcoRI; Site_2: NotI
Host: Escherichia coIi DH10B.
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1 (bases 1 to 883)

Croning, M.D.R., Ashurst, J.L., Taylor, R., Zorn, A.M. and Rogers, J. Sanger Xenopus tropicalis EST project 2001 (11_2003)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     5; Length 883;
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/organism="Xenopus tropicalis"
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/db_xref="taxon:8364"
/clone="TTpA022d21"
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Perfect score:
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226.8
226.3
226.3
24.4.4
22.3
22.3
22.3
23.3
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Maximum DB
                                                  OM nucleic
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Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi; Mammalia; Eutheria; Primates; Catarrhini; Hominidae; Homo. 1 (bases 1 to 545) Mahairas, G.G., Wallace, J.C., Smith, K., Swartzell, S., Holzman, T., Keller, A., Shaker, R., Furlong, J., Young, J., Zhao, S., Adams, M.D. and
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    AQ570246 15.00 T/A RPCI-11 Human Male BAC Library Homo sapiens genomic clone Plate=932 Col=17 Row=K, genomic survey sequence.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Bukaryota, Metazoa, Chordata, Craniata, Vertebrata, Euteleostomi, Archosauria; Aves. Neognathae; Galliformes; Phasianidae; Hasianinae; Gallus.

1 (bases 1 to 701)

Kremitzki, C., Higginbotham, J., Wylie, K., Carter, J., McPherson, J., Warren, W., Graves, T., Mardis, E. and Wilson, R.

Unpublished (2003)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Sequence-tagged connectors: A sequence approach to mapping and scanning the human genome Proc. Natl. Acad. Sci. U.S.A. 96 (17), 9739-9744 (1999) 99380589
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            /cell_lime="UCD001, inbred 256"
/clone_lib="TAM32"
/note="Vector: pECBAC1, Site_l: EcoR1, Site_2: EcoR1,
/TAM32 Remale Chicken library - for library and clone
ordering information: http://www.hbz.tamu.edu"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Contact: Mahairas GG, Wallace JC, Hood L
High Throughput Sequencing Center
University of Washington
401 Queen Anne Avenue North, Seattle, WA 98109, USA
TEL: (206) 616-3818
Exx: (206) 616-3887
Email: jwallace@u.washington.edu
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Length 701;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        25; Indels
                                                                                                                                                                                    Contact: Richard K. Wilson
Genome Sequencing Center
Washington University School of Medicine
Email: submissions@watson.wustl.edu
Insert Length: 152000 Std Error: 0.00
Seq primer: Sp6 ATTAGGAGACACTATAG
Class: BAC ends
High quality sequence start: 7
High quality sequence stop: 349.
Location/Qualifiers
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                    /mol_type="genomic_DNA"
/strain="Red_Jungle_Fowl"
/db_xref="taxon:9031"
/clone="TAM32-25K5"
                                                                                                                                                                                                                                                                                                                                                                                                                       1. 701
/organism="Gallus gallus"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                /sex="female"
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AQ570246.1 GI:4963466
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AQ570246/c
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                                                                                                                                                                                                                                                                                                                               CLO84804 1040 bp DNA linear GSS 05-JAN-2004 ISB1-3P20_Sp6.1 ISB1 Xenopus tropicalis genomic clone ISB1-3P20, genomic survey sequence.
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                                                                                                                    594 GATAGTTGTTTAGAAGTTAGAATGTAAACTGAGTAGTAGAGGGGGCCTTAAGGGTAATAGC 535
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Kenopus tropicalis
Bukaryota, Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
Amphibia; Batrachia; Amura; Mesobatrachia; Pipoidea; Pipidae;
Kenopodinae; Kenopus; Silurana.
I (Dases I to 1040)
Kremitzki, C., Carter, J., McPherson, J., Warren, W., Graves, T.,
Mardis, E. and Wilson, R.
A pivalcal map of the xenopus tropicalis genome
Unpublished (2003)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               /organism="Xenopus tropicalis"
/mol_type="genomic DNA"
/db xref="tsxon:8364"
/clone="ISB1-3P20"
/clone="ISB1-1BB1"
/note="Vector: pBeloBAC11; ISB-1 Xenopus tropicalis BAC
Library Segment 1"
                                                                           4 GCTAATACTGTAGGAGTTTCAATTTCAGCAGGGTATCAGAACGGCTTTACTGGTAATATC
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                                 21; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Genome Sequencing Center
Washington University School of Medicine
Email: submissions@watson.wuetl.edu
Insert Length: 75000 Std Error: 0.00
Seq primer: Sp6 ATTTAGGTGACACTATAG
Class: BAC ends
                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Xenopus tropicalis (western clawed frog)
           66.1%; Pred. No. 25; ive 0; Mismatches
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High quality sequence stop: 768.
Location/Qualifiers
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Gallus gallus
                                 41; Conservative
         Best Local Similarity
Matches 41; Conserv
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CC317613/c
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TITLE JOURNAL COMMENT

FEATURES

ACCESSION

Matches

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REFERENCE AUTHORS

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Gaps ; 9

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Best Local Similarity 72.9
Matches 35; Conservative
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Is (bases 1 to 289)

Adams, M.D., Kerlavage, A.R., Fleischmann, R.D., Fuldner, R.A.,
Bult, C.J., Lee, N.H., Kirkness, E.F., Weinstock, K.G., Gocayne, J.D.,
White, O., Sutton, G., Blake, J.A., Brandon, R.C., Man-Wai, C.,
Cline, T.R., Cotton, M.D., Earle-Hughes, J., Fine, L.D.,
Fitzgerald, L.M., Fitzhugh, W.M., Fritchman, J.L., Gocophagen, N.S.,
Glodek, A., Gnehm, C.L., Hanna, M.C., Hedblom, E., Hinkle, P.S., Jr.,
Kelley, J.M., Kelley, J.C., Liu, L.-I., Marmaros, S.M., Merrick, J.M.,
Moreno-Palanques, R.F., McDonald, L.A., Nguyen, D.T., Pelligrino, S.M.,
Phillips, C.A., Ryder, S.E., Scott, J.L., Saudek, D.M., Shirley, R.
Small, K.V., Spriggs, T.A., Utterback, T.R., Weidman, J.F., Li, Y.,
Bednarik, D.P., Forrie, A., Fischer, C., Hastings, G.A.,
He, W.W., Hu, J.S., Greene, J.M., Gruber, J., Hudson, P., Kim, A.K.,
Dillion, P.J., Wenis, Y.F., Whing, J., Xu, C., Yu, G.L., Raymond, L., Wei, Y.F., Wing, J., Xu, C., Yu, G.L., Ruben, S.M.,
Fraser, C.M., and Venter, J.C.,
Fraser, C.M., Haseltine, W.A., Fields, C.,
                                                                                                                                                                                                                                                                                                                                                                                                                                        /Clone lib="RPCI-11 Human Male BAC Library"
/note="Vector: pBACe3.6; Site_1: EcoRI; Site_2: EcoRI;
Male blood DNA was isolated from one randomly chosen donor and partially digested with a combination of EcoRI and EcoRI Methylase. Size selected DNA was cloned into the pBACe3.6 vector at EcoRI sites"
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Clones are derived from the human BAC library RPCI-11. For BAC library availability, please contact Pieter de Jong (pieter@dejong.med.buffalo.edu). Clones may be purchased from BACPAC Resources (http://bacpac.med.buffalo.edu/ordering bac.htm) or from Resear h Genetics (info@resgen.com). BAC end Web_Server: http://www.htsc.washington.edu
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Gaps
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0
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9712 Medical Center Drive, Rockville, MD 20850 USA
                                                                                                                                                                                                                                                                                                                                           /mol_type="genomic_DNA"
/db_xref="taxon:9606"
/clone="Plate=932 Col=17 Row=K"
                                                                                                                                                                                                                                                                                        l. .545
/organism="Homo sapiens"
                                                                                                                                                                                                                                     High quality sequence stop: 545.
Location/Qualifiers
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AA325500.1 GI:1977765
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                                                                                                                                                                                                                                                                                                                                                                                                                        sex="male"
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Query Match 40.3
Best Local Similarity 67.9
Matches 38; Conservative
                                                                                                                                                                                                                  ends
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AA325500/c
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1 (bases 1 to 454)
Asamizu,E., Nakamura,Y., Sato,S. and Tabata,S.
Characteristics of the Lotus japonicus Gene Repertoire Deduced from Large-Scale Expressed Sequence Tag (EST) Analysis
Plant Mol. Biol. 54 (3), 405-414 (2004)
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Kazusa DNA Research Institute
Yana 1532-3, Kisarazu, Chiba 292-0812, Japan
Email: assmizu@kazusa.or.jp, URL:http://www.kazusa.or.jp/en/plant/.
Location/Qualifiers
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Fax: 3018699423
Email: arkerlavætigr.org
Email: arkerlavætigr.org
For clone availability, additional sequence and expression
information related to this EST, please check the TIGR Human Gene
Index (http://www.tigr.org/tdb/hgi/hgi.html)
Seq primer: M13 Reverse.
Location/Qualifiers
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Lotus corniculatus var. japonicus
Eukaryota, Viridiplantae; Streptophyta, Embryophyta; Tracheophyta;
Spermatophyta; Magnoliophyta; eudicotyledons; core eudicots;
rosids; eurosids I; Fabales; Fabaceae; Papilionoideae; Loteae;
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/clone_lib="Locus japonicus Young plants (two-weeks old)"
/note="Vector: pBluescriptII SK-; Site_1: EcoRI; Site_2:
XhoI; isolate=Miyakojima MG-20"
                                                                                                                                                                                                                                      /mol_type="mRNA"
/db_xref="ATCC (inhost):126027"
/db_xref="taxon:9606"
/db_xref="careballum"
/dev_stage="adult"
/clone_libe="Cerebellum"
/clone_libe="Cerebellum"
/note="gran: brain; Vector: pBluescript SK-; Site_1:
EcoRI; Site_2: XhoI"
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/mol_type="mknA"
/woriety="japonicus"
/db_xref="taxon:34305"
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Length 289;
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                                                                                                                                                                                       1. .289
/organism="Homo sapiens"
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US Department of Agriculture, Agriculture Research Service, Pacific
West Area, Western Regional Research Center
800 Buchanan Street, Albany, CA 94710, USA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              /clone="CSODF035YD03"
/tissue_type="FETAL BRAIN"
/tissue_type="FETAL BRAIN"
/dev stage="fetal"
/clone lib="Homo sapiens FETAL BRAIN"
/note="Organ: brain; Vector: pCMVSPORT 6; lst strand cDNA was primed with a NotI-oligo(dT) primer. Five prime end was primed with a NotI-oligo(dT) primer. Five prime end enriched, double-strand cDNA was digested with Not I and cloned into the Not I and EcoRV sites of the pCMVSPORT 6 vector. Library was not normalized."
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Triticum aestivum
Triticum
Triticu
                                                                                                                         Bukaryota, Metazoa, Chordata, Craniata, Vertebrata, Buteleostomi, Mammalla, Butheria, Primates, Catarrhini, Hominidae, Homo.
1 (Dases 1 to 503)
Li,W.B., Gruber,C., Jessee,J. and Polayes,D.
Li,W.B., Gruber,C., Jessee,J. and normalization
Unpublished (2001)
On May 22, 2003 this sequence version replaced gi:31030277.
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WHE3303_G08_N15ZS Chinese Spring wheat drought stressed root CDNA
library Triticum aestivum CDNA clone WHE3303_G08_N15, mRNA
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/mol_type="mRNA"
/db_xref="taxon:9606"
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                                        sapiens (human)
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Mammalia; Eutheria; Primates; Catarrhini; Hominidae; Homo.
1 (bases 1 to 467)
Dias Neto,E., Garcia Correa,R., Verjovski-Almeida,S., Briones,M.R., Nagai,M.A., da Silva,W. Jr., Zago,M.A., Bordin,S., Costa,F.F., Goldman,G.H., Carvalho,A.F., Matsukuma,A., Baia,G.S., Simpson,D.H., Brunstein,A., deOliveira,P.S., Bucher,P., Jongeneel,C.V., Soares,F., Brentani,R.R., Reis,L.F., de Souza,S.J. and Simpson,A.J.
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BX451647 Homo sapiens FETAL BRAIN Homo sapiens cDNA clone CSODF035YD03 5-PRIME, mRNA sequence.
                                                                                                                                                                                                                   EST 23-JAN-2001
mRNA sequence.
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Email: asimpson@ludwig.org.br
This sequence was derived from the FAPESP/LICR Human Cancer Genome
Project. This entry can be seen in the following URL
(http://www.ludwig.org.br/scripts/gethtml2.pl?ti=CMO&t2=CMO-GN0110-
081100-577-c09&t3=2000-11-08&t4=1)
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/clone lib="CNN0110"
/note="Organ: placenta_normal; Vector: puc18; Site_1:
/note="Organ: placenta_normal; Vector: puc18; Site_1:
Sma1; Site_2: Sma1; A mini-library was made by cloning
products derived from ORESTES PCR (U.S. Letters Patent
application No. 196,716 - Ludwig Institute for Cancer
Research) profiles into the pUC 18 vector. Reverse
transcription of tissue mRNA and cDNA amplification were
performed under low stringency conditions."
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Laboratory of Cancer Genetics
Ludwig Institute for Cancer Research
Rua Prof. Antonio Prudente 109, 4 andar, 01509-010, Sao Paulo-SP,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Shotgun sequencing of the human transcriptome with ORF expressed
188 CIGITIGALITICAATITIAGCAGAGICCAATIAGGGITITIATICGAATIATIAGT 133
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Proc. Natl. Acad. Sci. U.S.A. 97 (7), 3491-3496 (2000)
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/mol_type="mRNA"
/db_xref="taxon:9606"
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High quality sequence stop: 467.
Location/Qualifiers
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BX451647.2 GI:47067421
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                                                                                                                                                                                                                                                                                                                                                                                                                                 /note="Vector: Lambda Uni-ZAP XR, excised phagemid; Site_1: BCORI; Site_2: XhoI; Plants were grown under normal conditions, then drought stressed to 80%, 70% and 60% RWG at Texas Tech University (D. Zhang in HT Nguyen lab). Total RNA was prepared separately for roots collected at the three different drought conditions. Equal amounts of total RNA were pooled from all three samples, poly(A) RNA were purified, one cDNA library was made, and the cDNA clones were in vivo excised to give pBluescript SK(-) phagemids in the TJ Close lab at the University of California, Riverside (Fenton, Turuspekov). Plasmid DNA preparations and DNA sequencing were performed in the OD Anderson lab (all other authors)."
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Bolotin-Fukuhara, M., Bon, E., Brottier, P., Caearegola, S.,
de-Montigny, J., Dujon, B., Durrans, P., Lepingle, A., Llorente, B.,
Malpertuy, A., Neuvejlise, C., Ozier-Kalogeropoulos, O., Potier, S.,
Saurin, W., Tekaia, F., Toffano-Nioche, C., Wesolowski-Louvel, M.,
Wincker, P. and Weissenbach, J.
Genomic exploration of the hemiascomycetous yeasts: 1. A set of
yeast species for molecular evolution studies
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Pichia farinosa
Eukaryota; Fungi; Ascomycota; Saccharomycotina; Saccharomycetes;
Saccharomycetales; Saccharomycetaceae; Pichia,
                                                                                                                                                                                                                /mol type="mrn#"
/cultivar="Chinese Spring"
/cultivar="Chinese Spring"
/clone="whis303 Gog Nos"
/tissue_type="root"
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/clone thost="E. coli SOLR"
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/clone lib="Chinese Spring wheat drought stressed root
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Tel: $1055957/3
Fax: 5105595818
Email: condersn@pw.usda.gov
Sequences have been trimmed to remove vector sequence and low quality sequence with phred score less than 20
Seq primer: SK primer.
Location/Qualifiers
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39.4%; Score 27.2; DB 5; Length 610;
Best Local Similarity 67.9%; Pred. No. 64;
Matches 38; Conservative 0; Mismatches 18; Indels
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FEBS Lett. 487 (1), 87-90 (2000)
20584725
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AL416412.1 GI:12196816
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Clones are derived from the human BAC library RPCI-11. For BAC

Library availability, please contact Pieter de Jong

library availability, please contact Pieter de Jong

(pieter@dejong.med.buffalo.edu). Clones may be purchased from

BACPAC Resources (http://bacpac.med.buffalo.edu/ordering) or from

Research Genet cs (info@resgen.com). BAC end search page:

http://www.tigr.org/tdb/humgen/bac_end_search/bac_end_search.html.

Seq primer: T7

Class: BAC ends.
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Mammalia; Butheria; Primates; Catarrhini; Hominidae; Homo.
1 (bases 1 to 446)
Zhao,S., Adams,M.D., Nierman,W., Malek,J., de Jong,P. and Venter,J.C.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Venter, J.C.
Use of BAC End Sequences from Library RPCI-11 for Sequence-Ready
Map Building
Unpublished (1997)
Other GSSs: RPCI-11-36018.TJ
Other GSSs: RPCI-11-36018.TJ
Department of Eukaryotic Genomics
The Institute for Genomic Research
9712 Medical Center Dr., Rockville, MD 20850
Tel: 301 838 0208
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0; Mismatches
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     /mol_type="genomic DNA" /strain="CBS 7064"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                /db_xref="taxon:4920"
/clone="AX0AA014D01"
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/note="end : T3"
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(bases 1 to 909)
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Matches 35; Conserv
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Mus musculus (house mouse)

Mus musculus (house mouse)

Mus musculus

Bukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;

Bukaryota; Metazoa; Chordata; Sciurognathi; Muridae; Murinae; Mus.

1 (bases 1 to 723)

2 Zhao, S., Nierman, W., Feldblyum, T., Malek, J., Shatsman, S.,

Akinret, B., Levins, M., Mogann, S., Tsegaye, G., Geer, K., Krol, M., de
Jong, P. and Fraser, C.M.

Mouse BAC End Sequences from Library RPCI-23

Unpublished (1999)

Other GSSs: RPCI-23-88K11.TV

Contact: Shaying Zhao

Department of Eukaryotic Genomics

The Institute for Genomic Research
                                                                                       A2241876 TO T23 bp DNA linear GSS 15-JUN-2000 RPCI-23-88K11.TJ RPCI-23 Mus musculus genomic clone RPCI-23-88K11, genomic survey sequence.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      selected DNA was cloned into the pBACe3.6 vector at the ECORI sites. The ligation products were transformed into DH10B electrocompetent cells (BRL Life Technologies). "
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CL477612 G1:45944658
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Email: szhao@tigr.org
Clones are derived from the mouse BAC library RPCI-23. For BAC
library availability, please contact Fieter de Jona
(pieter@dejong.med.buffalo.edu). Clones may be purchased from
BACPAC Resources (http://bacpac.med.buffalo.edu/orderingframe.htm)
or from Resea ch Genetics (info@resgen.com). BAC end page:
http://www.tigr.org/tdb/bac_ends/mouse/bac_end_intro.html
Plate: 88 row: K column: 11
Seq primer: SP6
Class: BAC ends.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              /note="Organ: Kidney/Brain; Vector: pBACe3.6; Site_1:
BEORI, Site_2: BEORI; Female C57BL/6J mouse kidney and/or
brain genomic DR sisolated and partially digested
with a combination of EcoRI and ECORI Methylase. Size
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 444 ATACTIGGAAGAGTCTCAAACTGACCAGGCTGGCAAGATGGCTTAGCAGGTAAGAATGCT 386
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     8 ATACTGTAGGAGTTTCAATTTCAGCAGGGTATCAGAACGGCTTTACTGGTAATATCACT
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 9712 Medical Center Dr., Rockville, MD 20850, USA
Tel: 301 838 0200
Fax: 301 838 0208
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Score 27; DB 8
Pred. No. 78;
0; Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         /organism="Mus musculus"
/mol_type="genomic DNA"
/strain="C57BL/6J"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             /db_xref="taxon:10090"
/clone="RPCI-23-88K11"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  /lab_host="DH10B"
/clone lib="RPCI-23"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Location/Qualifiers
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              /sex="Female"
                                                                                                                                                                                                          AZ243876.1 GI:8557067
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222 CACATTA 216
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                                                                    RESULT 13
AZ243876/c
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AUTHORS
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CL477612
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/organism="Glycine max"
/orditivar="Walliams B2"
/db_xref="taxon:3847"
/db_xref="taxon:3847"
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/clone_Tib="Young leaves"
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/note="Vector: pOT2; Site_1: BstXI; Randomly sheared
genomic DNA ranging from 0.7-1.5 kb were end repaired and
ligated to BstXI linkers prior to cloning in BstXI-cut
pOT2. Liblib: 230"
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        493 bp DNA linear GSS 30-AUG-2000-
abg5912.y1 Soybean random, unfiltered genomic library Glycine max
genomic, genomic survey sequence.
CL900277
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Spermatophyta; Magnoliophyta; eudicotyledons; core eudicots;
rosids; eurosids I; Fabales; Fabaceae; Papilionoideae; Phaseoleae;
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                                                                                                                                                                                                                                                                                                                                                                              29
                                                                                                                                                                                                                                                                                                                                                                                                                       85
                                                                                                                                                            /clone_lib="RPcI-11"
/note="Vector: pBACe3.6; Site_l: EcoRI; Site_2: EcoRI;
RPCI11 Human Male BAC Library"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       0; Gaps
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Pred. No. 73;
0; Mismatches 25; Indels
                                                                                                                                                                                                                                                                                 8; Length 446;
                                                                                                                                                                                                                                                                                                                               20; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Unpublished (2004)
Contact: Gary Stacey
University of Missouri
108 Waters Hall, Columbia, MO 65211, USA
Tel: 573-884-1267
                                                                                                                                                                                                                                                                     DB 6
                                                                                                                                                                                                                                                                              Score 27; DB 8; Pred. No. 72; 0; Mismatches
                 /mol_type="genomic_DNA"
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/db_xref="taxon:9606"
/clone="RPCI-11-360I8"
/sex="Male"
                                                                                                                                      cell_type="Lymphocytes"
organism="Homo sapiens"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Location/Qualifiers
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Email: staceyg@missouri.edu
LidID: 230
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       CL900277.1 GI:51660910
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llarity 66.1%;
Conservative (
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Best Local Similarity 62.77
...rhes 42; Conservative
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                                                                                                                                                                                                                                                                                                  l Similarity
39; Conserv
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SOURCE ORGANISM

ACCESSION KEYWORDS

VERSION

TITLE JOURNAL COMMENT

REFERENCE AUTHORS

CL900277/c LOCUS

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Search completed: November 20, 2005, 07:59:37 Job time : 1683 secs
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                                                                                                                                                                                                                                                                                                                                                                                                                                        Syngenta Biotechnology Inc.
3054 Cornwallis Rd., Research Triangle Park, NC 27709, USA
Email: allen.sessions@syngenta.com
ABRC Stock Number CS812818; T-DNA left border flanking sequences of
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            ö
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Bukaryota; Viridiplantae; Streptophyta; Embryophyta; Tracheophyta; Spermatophyta; Magnoliophyta; eudicotyledons; core eudicots; rosids; eurosids II; Brassicales; Brassicaceae; Brassica.

1 (bases 1 to 701)
Delehaunty, K., Fewell, G., Fulton, L., McCombie, W.R., Miner, T., Mash, W., Rabinowicz, P.D. and Wilson, R.K.
Whole genome shotgun reads from Brassica oleracea
                        Arabidopsis thaliana (thale cress)
Arabidopsis thaliana
Bukaryota, Viridiplantae, Streptophyta; Embryophyta; Tracheophyta;
Spermatophyta; Magnoliophyta; eudicotyledons; core eudicots;
rosids; eurosids II; Brassicales; Brassicaceae; Arabidopsis.
                                                                                                                                                                             Sessions, A., Burke, E., Presting, G., Aux, G., McElver, J., Patton, D., Dietrich, B., Ho, P., Bacwaden, J., Ko, C., Clarke, J.D., Cotton, D., Bullis, D., Snell, J., Miguel, T., Hutchison, D., Kimmerly, B., Mitzel, T., Katagiri, F., Glazebrook, J., Law, M. and Goff, S.A. A high-throughbut Arabidopsis reverse genetics system Plant Cell 14 (12), 2985-2994 (2002)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Syngenta Arabidopsis Insertion Library (SAIL) lines are available through the Arabidopsis Biological Resource Center (ABRC). Sequences represent a pool of amplified genomic regions and not single contiguous sequences.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          /mol_type="genomic DNA"
/ecotype="genomic DNA"
/ecotype="Columbia"
/db xref="taxno:3702"
/clone="gall_276_F05.v1"
/clone="taxno:3702"
/clone lib="SALL_Collection"
/note="T-DNA left border sequences were isolated using a modified Tall-PCR strategy"
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       'organism="Arabidopsis thaliana"
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Genome Sequencing Center
Washington University School of Medicine
Bmail: submissions@watson.wustl.edu
Plate: oei33 row: f column: 09
Seq primer: -21UPPOT forward
Class: shotgun
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                                                                                                                                                                                                                                                                                                                                                                                             Contact: Sessions A
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Class: TDNA tagged.
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BH998573/c
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/mol_type="genomic DNA"

/db_xref="taxon:3712"

/db_xref="taxon:3712"

/clone lib="B.oleracea002"

/note="Vector: pOTw13; Whole genome shotgun library from flowering buds. DNA was purified from a crude nuclear prep using Brassica oleracea TO1000DH3 buds provided by Thosmas Osborn at the University of Wisconsin. Genomic DNA was provided by Pablo Rabinowicz (CSHL) and the shotgun library prepared at Washington University Genome Sequencing Center."
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                                                                             organism="Brassica oleracea"
                                                                                                                                                                                                                                                                                                                                                                                                                         38.8%; Score 26.8; 1 64.5%; Pred. No. 91;
High quality sequence stop: 551.
Location/Qualifiers
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Best Local Similarity 64.5%
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GenCore version 5.1.6
Copyright (c) 1993 - 2005 Compugen Ltd.
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                                                                                                                                            OM nucleic - nucleic search, using sw model
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Gapop_60.0 , Gapext 60.0
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Maximum DB seq length: 200000000
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1: 9b ba:*

2: 9b htg:*

1: 9c ow:*

1: 9c ow:*

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Pred. No. is the number of results predicted by chance to have a score greater than or equal to the score of the result being printed, and is derived by analysis of the total score distribution.

| | Description | AF481924 Dictyoste | AC150972 Bos tauru | AC119171 Mus muscu | Continuation (2 of | AC068413 Homo sapi | AC121063 Rattus no | AC131778 Mus muscu | AC131662 Mus muscu | AC127856 Rattus no | AC110939 Rattus no | AC098950 Rattus no | AC137325 Rattus no | AR551479 Sequence | BC083546 Rattus no | AF395746 Rattus no | AF387731 Mus muscu | AR091458 Sequence | AR104409 Sequence | AR260534 Sequence |
|-----------|--------------------------|--------------------|--------------------|--------------------|--------------------|--------------------|--------------------|--------------------|--------------------|--------------------|--------------------|--------------------|--------------------|-------------------|--------------------|--------------------|--------------------|-------------------|-------------------|-------------------|
| SUMMARIES | ΔΙ | AF481924 | AC150972 | AC119171 | AC128221 1 | AC068413 | AC121063 | D AC131778 |) AC131662 | AC127856 | AC110939 | AC098950 | AC137325 | AR551479 | D BC083546 |) AF395746 |) AF387731 | AR091458 | AR104409 | AR260534 |
| | Query Match Length DB | 4490 3 | 99 2 | 27 2 | 00 | 62 9 | 41 2 | 90 | 28 10 | 95 2 | 53 2 | 53 2 | 08 2 | 1659 6 | 2162 10 | 2182 10 | 2470 10 | 7568 6 | 7568 6 | 7568 6 |
| | Leng | 44 | 152799 | 190527 | 110000 | 157865 | 165741 | 175406 | 178528 | 192595 | 219353 | 225253 | 277508 | | | | | | | 75 |
| do | Query | 29.0 | 29.0 | 29.0 | 27.5 | 27.5 | 27.5 | 27.5 | 27.5 | 27.5 | 27.5 | 27.5 | 27.5 | 26.1 | 26.1 | 26.1 | 26.1 | 26.1 | 26.1 | 26.1 |
| | Score | 20 | 20 | 20 | 19 | 19 | 19 | 19 | 19 | 19 | 19 | 19 | 19 | 18 | 18 | 18 | 18 | 18 | 18 | 18 |
| | Result No. | - | ~ | ო | 4 | ហ | ø | 7 | ω | σ | 10 | 11 | 12 | 13 | 14 | 15 | 16 | 17 | 18 | 19 |
| | Re | υ | O | | U | U | υ | Ų | U | υ | υ | U | υ | | U | υ | U | Ų | O | υ |

| AX743559 Sequence M89923 Sugarcane b | Continuation (4 of | | r | AC149660 Bos tauru | AC151077 Bos tauru | AC116340 Homo sapi | AC150571 Bos tauru | AC010595 Homo sapi | AC120860 Mus muscu | AC151057 Bos tauru | AC021318 Homo sapi | AL807236 Mouse DNA | AC118037 Mus muscu | AC105529 Rattus no | AL929345 Zebrafish | AC147195 Bos tauru | AL732620 Mouse DNA | AC096987 Rattus no | CR354394 Danio rer | AC128960 Rattus no | AC128425 Rattus no | AL954838 Zebrafish | AE017028 Bacillus | AP005374 Thermosyn |
|---|--------------------|-------------|-------------|--------------------|--------------------|--------------------|--------------------|--------------------|--------------------|--------------------|--------------------|--------------------|--------------------|--------------------|--------------------|--------------------|--------------------|--------------------|--------------------|--------------------|--------------------|--------------------|-------------------|--------------------|
| AX743559 4 SBVORFS | | AE017225_14 | AE017334_14 | AC149660 | AC151077 | AC116340 | AC150571 | AC010595 | AC120860 | AC151057 | AC021318 | 0 AL807236 | AC118037 | AC105529 | AL929345 | AC147195 | 0 AL732620 | AC096987 | CR354394 | AC128960 | AC128425 | AL954838 | AE017028 | AP005374 |
| 14 | ~ | н . | - | N | N | σ | ~ | Φ | N | N | N | 10 | ~ | ~ | Ŋ | N | 2 | ~ | 0 | ~ | ~ | ស | Н | - |
| 7568 7568 | 98246 | 110000 | 110000 | 110134 | 154279 | 160144 | 172894 | 179484 | 185784 | 187210 | 198784 | 201437 | 214170 | 217924 | 222615 | 223761 | 230116 | 231559 | 244097 | 265423 | 265932 | 268324 | 290117 | 301200 |
| 26.1 | 1.93 | 1.93 | 26.1 | 26.1 | 193 | 26.1 | 1.93 | 26.1 | 1.93 | 26.1 | 26.1 | 1.93 | 1.93 | 1.98 | 36.1 | 1.98 | 1.93 | 1.98 | 1.93 | 1.93 | 26.1 | 1.93 | 26.1 | 16.1 |
| 18 8 | 18 | 18 | 18 | 18 | 18 | 18 | 18 | 18 | 18 | 18 | 18 | 18 | 18 | 18 | 18 | 18 | 18 | 18 | 18 | 18 | | | | 18 |
| c 20 c 21 | 22 | c 53 | 0 | c 25 | ~ | c 27 | 28 | 59 | n | c 31 | c 35 | ٣ | 34 | c 35 | e | m | c 38 | c 39 | 40 | 4 | c 45 | c 43 | C 44 | 45 |
| | | | | | | | | | | | | | | | | | | | | | | | | |

ALIGNMENTS

| 81924/c | |
|---------|---|
| S | AF481924 4490 bp DNA linear INV 19-AUG-2002 |
| INITION | Dictyostelium discoideum cyclic GMP-binding protein D (gbpD) gene, |
| 100 | complete cds. |
| POTOS | |
| NOIS | AF481924.1 GI:21069540 |
| ORDS | |
| RCE | Dictyostelium discoideum |
| RGANISM | Dictyostellum discoideum |
| | Eukaryota; Mycetozoa; Dictyostellida; Dictyostellum. |
| ERENCE | 1 (bases 1 to 4490) |
| JTHORS | Bosgraaf, L., Russcher, H., Smith, J.L., Wessels, D., Solls, D.R. and |
| | Van Haastert, P.J.M. |
| ITLE | A novel cGMP signalling pathway mediating myosin phosphorylation |
| | and chemotaxis in Dictyostelium |
| DURNAL | IBO J. (2002) |
| ERENCE | 2 (bases 1 to 4490) |
| JTHORS | Goldberg,J.M., Bosgraaf,L., Van Haastert,P.J. and Smith,J.L. |
| ITLE | Identification of four candidate cGMP targets in Dictyostelium |
| DURNAL | Proc. Natl. Acad. Sci. U.S.A. 99 (10), 6749-6754 (2002) |
| EDLINE | 22008080 |
| PUBMED | 12011437 |
| ERENCE | 3 (bases 1 to 4490) |
| THORS | Smith, J.L., Goldberg, J.M., Bosgraaf, L., Russcher, H. and Van |
| | Haastert, P.J.M. |
| ITLE | Direct Submission |
| DURNAL | Submitted (12-FEB-2002) Boston Biomedical Research Institute, 64 |
| | Grove St., Watertown, MA 02472, USA |
| rures | /Qua] |
| source | 14490 |
| | /organism="Dictyostelium discoideum" |
| | /mol_type="genomic DNA" |
| | /db_xref="taxon:44689" |
| gene | <57>4440 |
| ı | /gene="gbpD" |
| mRNA | join(<57201,312471,575821,9021723,1876>4440) |
| | /gene="gbpu" / |
| CDS | /product="cyclic GMP-binding protein D" join(57201,312471,575821,9021723,18764440) |
| | /gene="gbpD" /note="GbpD; RasGEF" |
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(bases 1 to 152799)
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9551: 9
11893: 0
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14571:
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24227:
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Direct Submission
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Direct Submission
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11894
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TITLE
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          TITLE
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                                                                                                                                                                                          TKYRMSFTGNDPLPSVSSTLSEREWKILITNSKTIIYPRGKTVLSVGETNTNIYRVIS
RVKVETLKSPNSDADLGAGGGGGDNRGEDNSLMAIKARNBLSLNLPAQDDGYYVE
BGEIFGGESFLYTDRPMLSNIIVDSGCELMEIEKSFVLQLFASEHQLSATFYKFIGV
IQAQLIKSIINFSTRNYGNGGSGGSGSNGNGGGSSNGAGGGLSSSVGIGNLNSPNIN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          RIDFKRRSTIFETPSSLDILRDGNDSSFRTKFCLSQDEVIIKRYQCKHNNMNGTLYIT
KHNLCFEGKFLGINKNKTIPFDRTDKILTVDKNIMTVTTKEKVKKFTFKSHDDLNEGY
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             GISVQIWANHLNINVKQQLQLQQQQLQQQQQQQQPSQQPSQQSSQLQQSVSASSTTP
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         PVPNSPKVGRGESFSNIKDLPSKDEWNQILKGTKPLTFKKGEILLICEGVEYQKMFQIV
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              KNNSSISNTNSNTSIDGGVGGGLSPQTLVDPKNSVIVSKLTHGSIFGEMSFLLPGGSA
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Bos taurus clone CH240-35515, WORKING DRAFT SEQUENCE, 27 unordered
                                                                                                  /trānslation="MTDYPFYKPDDETNIIYNININKKEGFSAIKSCSLAKLIEKLTS
TKQLHTYFSSAFFLTYRDFTTPLEIINLLISRYTGPPPDSSKDSLRLFEIEVDIVQAN
                                                                                                                                                                  VLSIFRTLIGTLIQVDFDTPKLSSSIIBFFNSLPESVKNELFLEFFKAKKMARPPGSI
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
Mammalia; Eutheria; Cetartiodactyla; Ruminantia; Pecora; Bovidae;
Bovinae; Bos
1 (bases 1 to 152799)
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0
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product="cyclic GMP-binding protein D"
protein id="AAM34042.1"
/db xref="G1:21069541"
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AC150972.1 GI:51315476
HTG; HTGS_PHASB1; HTGS_DRAFT.
Bos taurus (cow)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        1490 CTTTACTGGTAATATCACTA 1471
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      20; Conservative
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Best Local Similarity
Matches 20; Conserv
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ORGANISM
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KEYWORDS
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Li,Y., Li,Z., Linnell,M., Liu,W., Liu,Y.-S., Liu,Y., Liyanage,D., London,P., Lopez,J., Lorensuhewa,L., Lozado,R., Luk,T., Madu,R., Mahoney,C., Malloy,K., Mansouri,D., Martinez,E., McClelland,H., McPherson,J., Mercadao,C., Milosavijevic,A., Midja,E., Morgan,M., Morris,S., Munidasa,M., Murray,D., Nazarith,L., Ngo,D., Nguyen,N., Norwig-Esstaugh,E., Nott,A., Nwaokelemeh,O., Obregon,M., Ochi-Okorie,C., Odeh,E., Okouonu,G., Okwuonu,K., Parker,D., Pasternak,S., Patel,B., Patel,V., Paul,H., Perazo,A., Peraz,L., Perazo,J., Patel,B., Patel,B., Pu,L.-L., Puzo,M., Qin,X., Quinoz,J., Rabata,D., Rachlin,E., Reigh,R., Ren,Y., Reuter,M., Richards,S., Rives,C., Rodriguez,F., Reigh,R., Ren,Y., Sanders,W., Sanders,W., Sanders,W., Sanders,W., Sanders,W., Thornenon,R., Trejos,Z., Usmani,K., Vargo,C., Verduzco,D., Villasana,D., Virk,D., Volkov,A., Waldron,L., Walliams,R., Wall, Wan,Y., Yakub,S., Yan,R., Yaun,Y., Yu,F., Zhang,J., Zhang,L., Zhang,Z., Zhou,J., Weinstock,G. and Gibbs,R., Zhang,J., Zhang,Z., Zhang,Z., Zhang,J., Zhang,L., Zhang,Z., Zhang,Z., Zhang,J., Zhang,L., Zhang,Z., Zhang,Z.,
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NOTE: This is a "working draft' sequence. It currently consists of 27 contigs. The true order of the pieces is not known and their order in this sequence record is
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Submitted (17-AUG-2004) Human Genome Sequencing Center, Department of Molecular and Human Genetics, Baylor College of Medicine, One Baylor Plaza, Houston, TX 77030, USA
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Assembly program: Phrap; version 0.990329
Consensus quality: 150340 bases at least Q40
Consensus quality: 152636 bases at least Q30
Consensus quality: 155231 bases at least Q20
Estimated insert size: 166303; sum-of-contigs estimation
Estimated insert size: 172461; agarose-fp estimation
Quality coverage: 3x in Q20 bases; agarose-fp estimation
Quality coverage: 3x in Q20 bases; sum-of-contigs estimation
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       arbitrary. Gaps between the contigs are represented as runs of N, but the exact sizes of the gaps are unknown. This record will be updated with the finished sequence as soon as it is available and the accession number will be preserved.
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Chemistry: Dye-terminator Big Dye: 100% of reads
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   1: contig of 9451 bp in length
1: gap of unknown length
3: contig of 2342 bp in length
3: gap of unknown length
1: gap of unknown length
1: gap of unknown length
1: contig of 5763 bp in length
1: gap of unknown length
1: gap of unknown length
1: gap of unknown length
2: contig of 3693 bp in length
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S. (bases 1 to 199527)

Sirren, B., Linton, L., Nusbaum, C., Lander, E., Ali, A., Allen, N., Anderson, S., Barna, V., Bastien, V., Bloom, T., Boguslavkiy, L., Anderson, S., Barna, V., Bastien, V., Engopisno, A., Chang, J., Chagopisno, A., Chang, J., Chagopisno, A., Chang, J., Cook, A., Cooke, P., DeArellano, K., Dewar, K., Diaz, J.S., Dodge, S., Faro, S., Goyette, M., Gage, D., Galagan, J., Gardyna, S., Gord, S., Goyette, M., Gage, D., Galagan, J., Gardyna, S., Gande, S., Goyette, M., Gage, D., Galagan, J., Gardyna, S., Landers, T., Lehoczky, J., Levine, R., Lindbad-Toh, K., Lau, G., Machean, C., Machen, P., McKernan, K., Marquis, N., Mathews, C., Machean, C., Macdonald, P., Major, J., Marquis, N., Mathews, C., Nicol, K., Norwan, C., McKernan, K., Maldrim, J., Meneus, L., Norwan, C.H., O'Connor, T., O'Donnell, P., O'Neil, D., Oliver, J., Peterson, K., Phunkhang, P., Pierre, N., Pollara, V., Raymond, C., Retta, R., Rieback, M., Riley, R., Schauer, S., Schupback, R., Strauss, N., Subramanian, A., Travis, N., Trigilio, J., Vassillev, H., Viel, R., Wilson, B., Wu, X., Waman, D., Ye, W.J., Young, G., Direct, Submission

Direct Submission

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Direct Submission

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Research, 320 Charles Street, Cambridge, MA 02141, USA

Research, 320 Charles Street, Cambridge, MA 02141, USA

Estreen, B., Nusbaum, C., Lander, E., Abouelleil, A., Allen, N., Anderson, M., Anderson, S., Arachchi, H.M., Barna, N., Bastien, V., Bloom, T., Boguslavkiy, L., Boukhgalter, B., Camarata, J., Chang, J., Choepel, Y., Collymore, A., Cooke, P., Corum, B., Calagan, J., S., Dooley, K., Dorris, L., Erickson, J., Faro, S., Ferreira, P., FitzGerald, M., Gage, D., Galagan, J., Gardyna, S., Graham, L., Grand-Pierre, N., Hafez, N., Hagopian, D., Hagos, B., Hall, J., Horton, L., Hulme, M., Iliev, I., Johnson, R., Lindbad-Toh, K., Liu, G., Liu, X., Lui, A., Mabbitt, R., Lindblad-Toh, K., Liu, G., Liu, X., Lui, A., Mabbitt, R., MacLean, C., Macdonald, P., Major, J., Manning, J., Matchews, C., Macdonald, P., Major, J., Manning, J., Matchews, C., Macdonald, P., Major, J., Schauer, S., Schupback, R., Seevery, P., Son, Spencer, B., Stange-Thomann, N., Scomnor, T., O'Donnell, P., O'Neil, D., Oliver, J., Peterson, K., Seavery, P., Smith, C., Spencer, B., Stange-Thomann, N., Stojanovic, N., Stubbs, M., Talamas, J., Tesfaye, S., Theodore, J., Topham, K., Travers, M., Vasailiev, H., Venkataraman, V.S., Viel, R., Vo, A., Wilson, B., Wu, X., Wyman, D., Young, G., Zainoun, J., Zammer, A. and Zody, M., Seber, C., Cambridge, MA 02141, USA On Sep 3, 2004 this sequence version replaced gi:29135601.

All repeats were identified using Repeatmasker:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     .----- Genome Center
Center: Whitehead Institute/MIT Center for Genome Research
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Smit, A.F.A. & Green, P. (1996-1997)
http://ftp.genome.washington.edu/RM/RepeatMasker.html
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Contact: sequence submissions@broad.mit.edu
                      Birren, B., Nusbaum, C. and Lander, E.
Mus musculus chromosome 8, clone RP23-201B1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Center code: WIBR
Web site: http://www-seq.wi.mit.edu
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AUTHORS
TITLE
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AUTHORS
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Mus musculus chromosome 8 clone RP23-201B1 map 8, *** SEQUENCING IN PROGRESS ***, 5 unordered pieces.
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Eukaryota, Metazoa, Chordata, Craniata, Vertebrata, Euteleostomi,
Mammalia, Eutheria, Rodentia, Sciurognathi, Muridae, Murinae, Mus
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                                                                               f unknown length
g of 13073 bp in length
f unknown length
of 8421 bp in length
f unknown length
g of 2165 bp in length
f unknown length
g of 4287 bp in length
f unknown length
g of 2962 bp in length
                                                                                                                                                                                                                                of 18527 bp in length
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141526: contig of 8137 bp in length
14653: contig of 8137 bp in length
144673: contig of 3047 bp in length
14473: gap of unknown length
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HTG; HTGS PHASB1; HTGS FULLTOP; HTGS_ACTIVEFIN.
Mus musculus (house moüse)
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gap of unknown 1
contig of 4840 b
gap of unknown 1
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of 2847 b
unknown l
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of 3878 b
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of 8213
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gap of unknown
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/db_xref="taxon:9913"
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Dodge, S., Domino, M., Doyle, M., Ferreira, P., Fitzhugh, W., Gage, D., Galagan, J., Gardyna, S., Ginde, S., Goyette, M., Graham, L., Grant, G., Hagos, B., Heaford, A., Horton, L., Howland, J.C., Illev, I., Johnson, R., Jones, C., Kann, L., Karatas, A., Klein, J., Lakocque, K., Lamazares, R., Landers, T., Lehoczky, J., Levine, R., Lieu, C., Liu, G., Locke, K., Macdonald, P., Marquis, N., McDerthy, M., McBwan, P., McGurk, A., McKernan, K., McDheeters, R., Meldrim, J., Meneus, L., Mihova, T., Mirova, T., Mirova, T., Mirova, T., Morman, C., Mlenga, V., Morrow, J., Wurphy, T., Naylor, J., Norman, C.H., O'Connor, T., O'Donnell, P., O'Neil, D., Ollvar, T.M., Ollvar, J., Peterson, K., Pierre, N., Pisani, C., Pollara, V., Raymond, C., Riley, R., Rogov, P., Rothman, D., Stange-Thomann, N., Stojanovic, N., Subramanian, A., Talamas, J., Vesfare, S., Theodore, J., Tirrell, A., Travers, M., Trigilio, J., Vansiliev, H., Vulel, R., Vulel, R., Vulel, R., Vuley, R., Vulel, R., Vulel, R., Vulel, R., Almer, A. and Zody, M., X., Wyman, D., Ye, W.J., Direct Submission
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Research, 320 Charles Street, Cambridge, MA 02141, USA

Research, 320 Charles Street, Cambridge, MA 02141, USA

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S birren, B., Nubbaum, C., Lander, B., Ali, A., Allen, N., Anderson, S., Barna, M., Bastien, V., Bloom, T., Boguslavkiy, L., Boukhgalter, B., Camarata, J., Chang, J., Chazaro, B., Choepel, Y., Collymore, A., Cook, A., Cooke, P., DeArellano, K., Dewar, K., Diaz, J.S., Dodge, S., Faro, S., Ferreira, P., FitzGerald, M., Gage, D., Galagan, J., Rartes, P., FitzGerald, M., Gage, D., Galagan, J., Horton, L., Hume, W., Illev, I., Johnson, R., Jones, C., Kamat, A., Karatas, A., Kells, C., Landers, T., Levine, R., Lindblad-Toh, K., Liu, G., MacLean, C., Macdonald, P., Major, J., Matthews, C., Murphy, T., Naylor, J., Ngoyen, C., Nicol, R., Norbu, C., Norman, C., Norman, C., Norman, C., Roy, A., Schauer, S., Schupback, R., Seaman, S., Severy, P., Smith, C., Spencer, B., Stange-Thoman, N., Stojanovic, N., Talamas, J., Viel, R., Vo, A., Wilson, B., Waman, D., Young, G., Zainoun, J., Zembek, L., Zimmer, A. and Zody, M., Direct, Submission
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Submitted (14-AuG-2022) Whitehead Institute/MIT Center for Genome Research, 320 Charles Street, Cambridge, MA 02141, USA

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8 Birren, B., Nusbaum, C., Lander, E., Ali, A., Allen, N., Anderson, S., Barna, M., Bastien, V., Bloom, T., Boguslavkry, L., Boukhgalter, B., Camarata, J., Chang, J., Chazaro, B., Choepel, Y., Collymore, A., Cooke, P., DeArellano, K., Dewar, K., Diaz, J.S., Dodge, S., Faro, S., Hulme, W., Illev, I., Johnson, R., Janses, D., Karatas, A., Kells, C., Landers, T., Johnson, R., Janses, C., Kamat, A., Karatas, A., Kells, C., Landers, T., Levine, R., Lindblad-Toh, K., Liu, G., MacLean, C., Macdonald, P., Major, J., Matthews, C., Murphy, T., Naylor, J., Macon, C., Nicol, R., Norbu, C., Norman, C., Murphy, T., O'Donnell, P., O'Neil, D., Oliver, J., Peterson, K., O'Connor, T., O'Donnell, P., O'Neil, D., Oliver, J., Peterson, K., Schauer, S., Schuuback, R., Saeman, S., Severy, P., Rafaye, S., Theodore, J., Topham, K., Travers, M., Vassiliev, H., Zimmer, A. and Zody, M., Zembek, L., Zimmer, A. and Zody, M., Zembek, L., Zimmer, A. and Zody, M., Direct, Submission
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Web site: http://www-seg.wi.mit.edu
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Birren, B., Linton, L., Nusbaum, C., Lander, E., Abraham, H., Allen, N., Anderson, S., Baldwin, J., Barna, N., Bastien, V., Beda, F., Boguslavkiy, L., Buckhgalter, B., Brown, A., Burkett, G., Campopiano, A., Castle, A., Choepel, Y., Colangelo, M., Collins, S., Collymore, A., Cooke, P., DeArellano, K., Dewar, K., Diaz, J.S.,
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Mammalia; Eutheria; Primates; Catarrhini; Hominidae; Homo.
1 (bases 1 to 157865)
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Homo sapiens chromosome 8, clone RP11-27319, complete sequence.
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Gaps
          This record will be updated with the finished sequence as soon as it is available and the accession number will be preserved.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   LOCUS AC128221 Accession AC128221
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          2; Length 190527;
                                                                                                    1 21016: contig of 21016 bp in length 2116: gap of unknown length 10326: contig of 19209 bp in length 10326: qap of unknown length 10326: contig of 9640 bp in length 10466: Solo65: contig of 9640 bp in length 1046 127187: contig of 77022 bp in length 1188 127287: gap of unknown length 1048 197287: contig of 63240 bp in length 10527: contig of 63240 bp in length 10527: contig of 63240 bp in length
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         0; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         0; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           /clone="RP23-201B1"
/clone_lib="RPCI-23 Female Mouse BAC"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Birren, B., Nusbaum, C. and Lander, B.
Homo sapiens chromosome 8, clone RP11-27319
Unpublished
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  27.5%; Scor.
100.0%; Pred. No. 2...
0; Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      29.0%; Score 20; DB 100.0%; Pred. No. 6;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                  organism="Mus musculus"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                /mol_type="genomic DNA"
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                94411 TTTCAATTTCAGCAGGTAT 94430
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    96515 GAGTTTCAATTTCAGCAGG 96497
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     20 TTTCAATTTCAGCAGGTAT 39
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               chromosome="8"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        1 Similarity 100.0%; P:
20; Conservative 0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        17 GAGTTTCAATTTCAGCAGG 35
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           AC068413.11 GI:22218575
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Sequence split into 4 fragments
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Homo sapiens (human)
                                                                                                                                                                                                                                                                                                                                                                                                                                    .190527
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Query Match
Best Local Similarity 100.(
Matches 19; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Homo sapiens
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Best Local Similarity
Matches 20; Conserv
                                                                                                                                     21017
21117
40326
40426
50066
50166
127188
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AC128221 1/c
WPCOMMENT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Query Match
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AC068413/c
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VERSION
KEYWORDS
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AUTHORS
TITLE
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REFERENCE
AUTHORS
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à 셤 à 셤 rpt_family="L3"

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'clone lib="RPCI-11 Human Male BAC"
180. .404
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complement (20352, 20502)
/rpt family="MLTIF-int"
complement (20601, 20789)
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21641, 22011
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                                                       1. .157865

Organism="Homo sapiens"

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/db xref="taxon:9606"

/chromosome="8"
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complement (4240. .5444)
/rpt family="LIPA3"
5436. .6665
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          0937. .10959
rpt family="AT rich"
omplement(11349. .12239)
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                omplement (12240. .13722)
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/rpt_family="(CA)n"
complement (2459. .2847)
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7791. .7854

/rpt_family="(TTATA)n"

7855. .8087

/rpt_family="MLTLJ2"

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/rpt_family="(TTTC)n"
2103. .2147
Center project name: L10308
Center clone name: 273_1_9
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755, .7790
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 /rpt_family="AT_rich"
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9534. .9632
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6740...6892
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                                            Location/Qualifiers
                                                                                                                                                 clone="RP11-27319"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           rpt_family="MER20"
861. .10397
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         rpt_family="MLT2F"
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      rpt family="L1PB1"
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                                           FEATURES
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E Muzny, D.Marie., Metzker, M.Lee., Abramzon, S., Adams, C., Alder, J., Brandaranaike, D., Barber, M., Barnstead, M., Benahmed, F., Blowhin, D., Bandaranaike, D., Barber, M., Barnstead, M., Benahmed, F., Biswalo, K., Blankenburg, K., Blyth, P., Brown, M., Bryant, N., Buhay, C., Burch, P., Burrell, K., Calderon, E., Cardenas, V., Carter, K., Cavazos, I., Ceasar, H., Center, A., Chacko, J., Chavaz, D., Chen, G., Chen, R., Chen, R., Chen, G., Coyle, M., Cree, A., D. Souza, L., Davila, M.L., Davis, C., Day-Carroll, L., De Anda, C., Dederich, D., Delgado, O., Denson, S., Deramo, C., Ding, Y., Dinh, H., Divya, K., Draper, H., Dugan-Rocha, S., Dunn, A., Durlan, K., Davalle, T., Fan, G., Egan, A., Escotto, M., Escotto, M., Forbes, L., Foster, M., Foster, P.,
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Rattus norvegicus clone CH230-337G6, *** SEQUENCING IN PROGRESS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
Mammalia; Eutheria; Rodentia; Sciurognathi; Muridae; Murinae;
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HTG; HTGS_PHASE2; HTGS_DRAFT; HTGS_ENRICHED.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Query Match 27.5%; Score 19; DB 9; Best Local Similarity 100.0%; Pred. No. 20; Matches 19; Conservative 0; Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     /rpt_family="Ar_rich
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                                                                                                                                                                                                                               8595. .28633
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                                                                                                                                                                                                                                                                                                                                                                                                            .30638)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                        rpt_family="THB1C"
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28296. 28594
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family="AT_rich"
                                                                                                                                                                 / rpt family="Alusx" / rs555. 28594 / rpt family="Alusx" / rs555. 288595.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Rattus norvegicus (Norway rat)
Rattus norvegicus
                                                                  rpt family="MLT1C" 6688. .26771
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                85903 TAATACTGTAGGAGTTTCA 85885
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                                                                                                                                                                                                                                                                                                                                                                                                                                 family="FAM"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  6 TAATACTGTAGGAGTTTCA 24
                                                                                                                                                                                                                                                                                                                                                                                                                                                 1028. .31395
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AC121063/c
LOCUS
DEFINITION
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SOURCE
ORGANISM
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AUTHORS
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Presence C.M., Cabilla, A., Gunta, G., Gartz, M.,

Gabresory, E. Gerr, K. (2011) F., Grady, M., Gartz, M.,

Harradez, R., Harland, M., Hanland, E., Handston, C., Hanlander, M.,

Harradez, R., Howell, S., Haddan, S.L., Handston, A., Hagnander, M.,

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Kowle, C., Merl, C.L., Labow, M., Lovado, R.J., Luix, N., Ma. Jon,

Kowle, C., Mert, C.L., Labow, M., Lovado, R.J., Luix, N., Ma. Jon,

Kowle, C., Mert, C.L., Labow, M., Lovado, R.J., Luix, N., Ma. Jon,

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Mandston, M., Mandston, M., Mandston, M., Malloy, M., Mandston
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AUTHORS TITLE

JOURNAL

TITLE JOURNAL REFERENCE REFERENCE AUTHORS

TITLE JOURNAL

COMMENT

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* NOTE: Bstimated insert size may differ from sequence length

* NOTE: Bstimated insert size may differ from sequence length

* NOTE: This is a "working draft' sequence. It currently

* consists of 1 contigs. Gaps between the contigs

* are represented as runs of N. The order of the pieces

* are represented as runs of N. The order of the pieces

* is believed to be correct as given, however the sizes

• of the gaps between them are based on estimates that have

* provided by the submittor.

* This sequence will be replaced

* by the finished sequence as soon as it is available and

* the accession number will be preserved.

* In 15741: contig of 165741 bp in length.

Location/Qualifiers
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Suppherson, J.D. and Waterston, R.H.
Direct Submission
Submitted (25-AUG-2002) Genome Sequencing Center, 4444 Forest Park
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Bukaryotar, Metazoa, Chordata, Craniata, Vertebrata, Euteleostomi, Mammalia, Butheria, Rodentia, Sciurognathi, Muridae, Murinae, Mus. (Dases 1 to 175406)
Wang,C., Bielicki,L. and Meyer,R.
The sequence of Mus musculus BAC clone RP24-128C2
Uppublished (2001)
Consensus quality: 155599 bases at least Q30 Consensus quality: 156415 bases at least Q30 Estimated insert size: 160958; sum-of-contigs estimation Quality coverage: 6x in Q20 bases; sum-of-contigs estimation
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Gaps
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Mus musculus BAC clone RP24-328C2 from chromosome 7, complete
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                                                                                                                                                                                                                                                                                                                                                                                                                      /organism="Rattus norvegicus"
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/note="wgs end_extension
clone_end:Sp6"
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100.0%; Pred. No.
:ive 0; Mismatch
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Best Local Similarity
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SOURCE
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.c. family
.bf75.
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42357.
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        The RPCI-24 BAC Library has been constructed by Pieter de Jong and coworkers (http://www.chori.org) from male C57BL/6J mouse spleen and/or brain genomic DNA. The clone and detailed information can be obtained from Pieter de Jong and coworkers at http://www.chori.org
 Direct Submission
Submitted (15-MAY-2004) Genome Sequencing Center, 4444 Forest Park
Submitted (15-MAY-2004) Genome Sequencing Center, 4444 Forest Park
St. Louds, MO 63108, USA
On Apr 8, 2004 this sequence version replaced gi:32441367.
Center: Washington University Genome Sequencing Center
                                                                                                         Direct Submission
Submitted (08-APR-2004) Genome Sequencing Center, 4444 Forest Park
Parkway, St. Louis, MO 63108, USA
5 (bases 1 to 175406)
Wilson, R.K.
                                                                                                                                                                                                                                                                                                                                                                                                                                                              This sequence was finished as follows unless otherwise noted: all regions were double stranded, sequenced with an alternate chemistry, or covered by high quality data (i.e., phred quality >= 30); an attempt was made to resolve all sequencing problems, such as compressions and repeats; all regions were covered by at least one plasmid subclone, fosmid clone or direct clone walk sequence. Sequence from the Mouse Genome Sequencing Consortium whole genome shotgum may have been used to obtain the consensus sequence; and the assembly was confirmed by restriction digest.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             This sequence is the entire insert of the clone. This clone is overlapped by AC131662 and AC101851.

Location/Qualifiers

1. 175406

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                                                                                                                                                                                                                                                                                                              Center code: WUGSC
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State (bases 1 to 1922s).

Muzny, D. Marite., Metzker, M.Lee., Abramzon, S., Adams, C., Alder, J.,

Allen, C., Allen, H., Alsbrooks, S., Amin, A., Anguiano, D.,

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Morgan, M., Morris, S., Mullos, S., Mullosa, M., Mullos, M., Mullosavi, Mull
Submitted (01-FEB-2004) Genome Sequencing Center, 4444 Forest Park Parkway, St. Louis, MO 63108, USA On Feb 1, 2004 this sequence version replaced gi:38229414.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
Mammalia; Eutheria; Rodentia; Sciurognathi; Muridae; Murinae;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        192595 bp DNA linear HTG 12-00
Rattus norvegicus clone CH230-255D13, WORKING DRAFT SEQUENCE.
AC127856
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                                                                                                                              Center: Washington University Genome Sequencing Center
Center code: WUGSC
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HTG; HTGS_PHASE2; HTGS_DRAFT; HTGS_FULLTOP.
                                                                                                                                                                             Genome Center
                                                                                                                                                                                                                                                                                                                                                        organism="Mus musculus"
                                                                                                                                                                                                                                                                                                                                                                                /mol_type="genomic DNA"
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/chromosome="7"
/clone="RP23-257H24"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Rattus norvegicus (Norway rat)
Rattus norvegicus
                                                                                                                                                                                                                                                                                                         Location/Qualifiers
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ACCESSION
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KEYWORDS
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AC127856/c
LOCUS
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     JOURNAL
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Mammalia; Eutheria; Rodentia; Sciurognathi; Muridae; Murinae; Mus
1 (bases 1 to 178528)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Gaps
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           is406. .65530
note="Unresolved simple sequence repeat."
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        0; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Query Match 27.5%; Score 19; DB Best Local Similarity 100.0%; Pred. No. 20; Matches 19; Conservative 0; Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    The sequence of Mus musculus clone Unpublished
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            2 (bases 1 to 178528)
McPherson, J.D. and Waterston, R.H.
Direct Submission
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                                                                                                                                                                                                                                                                                                                                                                                77979. .58056
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58057. .58161
/rpc family="Alu"
59291. .59382
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59411. .59690
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56139. . 56717
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       33431 TTTCAGCAGGGTATCAGAA 33413
                                                                                                   /rpt_family="b4"
48958 .49004
/rpt_family="B4"
50214 .50836
                                                                                                                                                                                                                                                                                                         rpt_family="ERVK"
6858. .57079
                          /rpt_family="L1"
48726. 4800.
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5406. .65530
                                                                                                                                                                                                                                                                                                                                              rpt_family="B2"
7979. .58056
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67287. .67337
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                                                                                                                                                                                                     rpt_family="L1"
4064. .54132
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           /rpt_family="B4"
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             rpt_family="L1"
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Direct Submission
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RESULT 8 AC131662/c

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AUTHORS TITLE JOURNAL

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HTG 12-0CT-2002

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AC110939/c
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The sequence in this assembly is a combination of BAC based reads and whole genome shotgun sequencing reads assembled using Atlas (http://www.hgsc.bcm.tmc.edu/projects/rat/). Each contig described in the feature table below represents a scaffold in the Atlas assembly (a 'contig-scaffold'). Within each contig-scaffold, individual sequence contigs are ordered and oriented, and separated by sized gaps filled with Ns to the estimated size. The sequence contigs within a contig-scaffold that consist entirely of whole genome shotgun sequence reads. Both end sequences and whole genome shotgun sequence reads. Both end sequences and whole genome
Nankervis, C., Neal, D., Newton, N., Nguyen, N., Norris, S.,
Nwaokelemeh, O., Okwuonu, G., Olarnpunsagoon, A., Pal, S., Parks, K.,
Pasternak, S., Paul, H., Perez, A., Perez, L., Pfannkoch, C.,
Plopper, F., Poindexeer, A., Perez, L., Pfannkoch, C.,
Pluazo, M., Quiroz, J., Rachlin, B., Reeves, K., Regier, M.A., Reigh, R.,
Reilly, B., Reilly, M., Ren, Y., Reuter, M., Richards, S., Riggs, F.,
Rives, C., Rodkey, T., Rojas, A., Rose, M., Rose, R., Ruiz, S.J.,
Sanders, W., Savery, G., Scherer, S., Soctl, G., Shatsman, S., Shen, H.,
Shecty, J., Shvartsbeyn, A., Sisson, I., Sitter, C.D., Smajs, D.,
Steinle, M., Schorg, R., Sutton, A., Svatek, A., Tabor, P., Taylor, T.
Taylor, T., Thomas, N., Thomas, S., Tingey, A., Trejos, Z., Usmani, K.,
Valas, R., Vera, V., Vallasana, D., Waldron, L., Walker, B., Wang, J.,
Wang, Q., Wang, S., Warren, J., Wardron, L., Walker, B.,
Wijht, D., Wright, R., Wu, J., Yakub, S., Yen, J., Yoon, L., Yoon, V.,
Vi, F., Zhang, J., Zhou, J., Zhou, X., Zhao, S., Dunn, D., von
Niederhausern, A., Weiss, R., Smith, D.R., Holt, R.A., Smith, H.O.,
Direct Submission
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* (see http://www.hgsc.bcm.tmc.edu/docs/Genbank draft_data.html).

* NOTE: This is a "working draft' sequence. It currently

* Consists of 1 contigs. Gaps between the contigs

* are represented as runs of N. The order of the pieces

* is believed to be correct as given, however the sizes

* of the gaps between them are based on estimates that have

* provided by the submittor.

* This sequence will be replaced

* by the finished sequence as soon as it is available and

* the accession number will be preserved.
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Worley, K.C.

Burect Submission

Submiss
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Center: Baylor College of Medicine
Center code: BCM
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REFERENCE AUTHORS TITLE JOURNAL

COMMENT

AUTHORS TITLE JOURNAL

TITLE JOURNAL REFERENCE

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States 1 to 219353)

States 1 to 219353,

Allen, H., Alabrooke, S., Amin, A., Angulano, D.,

Allen, H., Alabrooke, S., Amin, A., Angulano, D.,

Allen, C., Allen, H., Alabrooke, S., Amin, A., Angulano, D.,

Anyalebechi, V., Aoyagi, A., Ayodeji, M., Baca, E., Baden, H.,

Baldwin, D., Bandaranalke, D., Barber, M., Barnetead, M., Benahmed, F.,

Biswalo, K., Blair, J., Blankehburg, K., Blyth, P., Brown, M.,

Bryant, N., Buhay, C., Burch, P., Burrell, K., Calderon, E.,

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Chacko, J., Chavez, D., Chen, G., Chen, Y., Chen, Z.,

Claveland, C., Cockrell, R., Cox, C., Coyle, M., Cree, A., D'Souza, L.,

Davila, M.L., Davis, C., Davy-Carroll, L., De Anda, C., Dederich, D.,

Dayola, M.L., Davis, C., Davy-Carroll, K., Dun, H., Divys, K.,

Draper, H., Dugan-Rocha, S., Dunn, A., Durbin, K., Duval, B., Eaves, K.,

Egan, A., Escotto, M., Bugene, C., Evans, C.A., Falls, T., Foster, M.,

Fernandez, S., Finley, M., Flaggi, N., Forbes, L., Foster, M., Garza, M.,

Gunaratne, P., Haaland, W., Hamil, C., Hamilton, C., Hamilton, K.,

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Hollins, B., Howells, S., Hulk, S., Nume, J., Idlebird, D., Jackson, A.,

Jackson, L., Jacob, L., Jang, H., Johnson, B., Johnson, R., Johnson, R.,

Karpathy, S., Kelly, S., Kelly, S., Khan, Z., King, L., Kovar, C.,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Rattus norvegicus clone CH230-238KS, *** SEQUENCING IN PROGRESS A**, 2 unordered pieces.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
Mammalia; Eutheria; Rodentia; Sciurognathi; Muridae; Murinae;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Gaps
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1 192595: contig of 192595 bp in length.
Location/Qualifiers
1. .192595
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HTG, HTGS_PHASE1, HTGS_DRAFT, HTGS_ENRICHED.
Rattus norvegicus (Norway rat)
                                                                                                 organism="Rattus norvegicus"
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184275. .186004
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/note="clone_boundary
clone_end:T7
site:MboI
                                                                                                                                                                                                                                                                                                                                                                                                                                              sequence:RXACK19TJ"
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/clone="CH230-255D13"
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/note="clone_bouclone_end:Sp6
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Matches 19; Conservative
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RESULT 11
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Kowis, C., Kraft, C.L., Lebow, H., Levan, J., Lewis, L., Li, Z., Liu, J., Liu, W., Liu, Y., London, P., Longacre, S., Lopez, J., Liu, W., Mahladarthe, M., Mahmoud, M., Malloy, K., Ma, J., Mahshwari, M., Mahmadarthe, M., Mahmoud, M., Mattinez, E., Mangum, A., Mawhiney, S., Mcleod, M. P., Mclin, R., Martin, R., Martinez, E., Mangum, S., Milosayljevic, A., Miner, G., Menen, E., Moncemayor, J., Moore, S., Milosayljevic, A., Miner, G., Munidasa, M., Murphy, M., Nair, L., Nankeris, C., Neal, D., Newton, M., Nguyen, N., Norris, S., Nankeris, S., Nankeris, S., Munidasa, M., Murphy, M., Nair, L., Pasternak, S., Paul, H., Perez, A., Perez, L., Pfankoch, C., Patke, K., Popper, P., Polndexter, A., Popovic, D., Primus, E., Pu, L.-L., Puazo, M., Quiroz, J., Rachlin, E., Reves, K., Regier, M., Saker, S., Scott, G., Shatsman, S., Shen, H., Sheet, Y., Shvartsbeyn, A., Sisson, I., Sitter, C.D., Smajs, D., Sneed, A., Sodergren, E., Song, X.-Z., Sorelle, R., Sosa, J., Sneed, A., Sodergren, E., Sutton, A., Svater, R., Taylor, C., Taylor, T., Thomas, M., Thomas, S., Tingey, A., Trejos, Z., Usmani, K., Valas, R., Wail, Son, W., Willson, R., Waillson, H., Waillson, R., Waillson, H., Waillson, R., Waillson, H., Waillson, R., Waillson, H., Waillson, R., Waillson, M., Wainstock, G. and Gibbs, R.A., Smath, D., Wailth, D., Wailson, M., Wainstock, G. and Gibbs, R.A., Mallson, M., Holt, R.A., Smith, D., Wainstock, G. and Gibbs, R.A., Holt, R.A., Smith, D., Wainstock, G. and Gibbs, R.A., Mallson, M., Man, M., M., Man, M., Man, M., Man, M., Man, M., Man, M., M., Man, M., M., M., Man, M., M., M., Man, M., M., M., M., M., M., M., M., M., M
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NOTE: This is a "working draft' sequence It currently consists of 2 contigs. The true order of the pieces is not known and their order in this sequence record is arbitrary. Gaps between the contigs are represented as runs of N, but the exact sizes of the gaps are unknown. This record will be updated with the finished sequence
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Submitted (199-00T-2002) Human Genome Sequencing Center, Department of Molecular and Human Genetics, Baylor College of Medicine, One Baylor Plaza, Houston, TX 77030, USA
On Sep 19, 2002 this sequence version replaced gi:22450400.
The sequence in this assembly is a combination of BAC based reads and whole genome shocgun sequencing reads assembled using Atlas (http://www.hgsc.bcm.tmc.edu/projects/rat/). As a result, the sequence may extend beyond the ends of the clone and there may be contigs that consist entirely of whole genome shocgun sequence reads. Both end sequences and whole genome shocgun sequence only contigs will be indicated in the feature table.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Submitted (17-FEB-2002) Human Genome Sequencing Center, Department of Molecular and Human Genetics, Baylor College of Medicine, One Baylor Plaza, Houston, TX 77030, USA (bases 1 to 21935))

Rat Genome Sequencing Consortium.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Center clone name: CH230-238K5
------- Summary Statistics
Assembly program: Phrap; version 0.990329
Consensus quality: 190762 bases at least Q40
Consensus quality: 193329 bases at least Q30
Consensus quality: 195199 bases at least Q30
Estimated insert size: 21648B; sum-of-contigs estimation
Q20 bases; sum-of-contigs estimation
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Center: Baylor College of Medicine
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          (bases 1 to 219353)
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Worley, K.C.
Direct Submission
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TITLE

REFERENCE AUTHORS JOURNAL TITLE

REFERENCE AUTHORS TITLE

COMMENT

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Muzny, D. Marie., Metzker, M. Lee., Abramzon, S., Adams, C., Alder, J., Allen, H., Alsbrooks, S., Amin, A., Anguiano, D., Allen, H., Alsbrooks, S., Amin, A., Anguiano, D., Anyalebechi, V., Aoyadi, A., Ayodeji, M., Baca, E., Baden, H., Baldin, D., Bandaranaike, D., Barber, M., Barnstead, M., Benahmed, F., Biswalo, K., Blair, J., Blankenburg, K., Blyth, P., Brown, M., Bryant, N., Blahay, C., Burch, P., Burrell, K., Caletern, E., Cardenas, V., Carter, K., Cavazos, I., Ceasar, H., Center, A., Chavaz, D., Chen, G., Chen, Z., Chen, Z., Chavez, D., Chen, G., Chen, Y., Chen, Y., Chen, Z., Chavez, D., Davis, C., Develand, C., Davy-Carroll, L., De Andar, D. D'Souza, L., Davis, M., Le Boats, C., Develand, C., Davy-Carroll, L., De Andar, C., Dederich, D., Denson, S., Derano, C., Dinh, H., Divya, K., Draper, H., Dugan-Rocha, S., Dunn, A., Durbin, K., Duval, B., Eaves, K., Escetto, M., Escetto, M., Escetto, M., Ganta, R., Garrer, M., Guevra, M., Guevra, M., Gubisi, A., Ganta, R., Garcia, A., Garner, T., Garza, M., Gabisi, A., Ganta, R., Garcia, A., Garner, T., Garza, M., Gunaratne, P., Haaland, M., Hamil, C., Hamilton, C., Hamilton, K., Harles, S., Hladun, S. L., Hodgson, A., Hogeson, A., Hogeson, A., Jacob, L., Jacob, L., Jiang, H., Johnson, B., Johnson, R., Johnson, R., Johnson, R., Johnson, R., Johnson, R., Liu, J., Liu, Y., London, P., Longacre, S., Lorensuhewa, L., Loulseged, H., Lozado, R.J., Liu, X., Man, M., Manjum, B., Manjum, R., Manjum, B., Manjum, R., Manjum, 
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Rattus norvegicus clone CH230-175D13, *** SEQUENCING IN PROGRESS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Eukaryota, Metazoa, Chordata, Craniata, Vertebrata, Euteleostomi,
Mammalia, Eutheria, Rodentia, Sciurognathi, Muridae, Murinae,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Gaps
as soon as it is available and the accession number will be preserved.
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Length 219353;
                                               208974 209073: contig of 208973 bp in length 208974 219353: contig of 10280 bp in length. Location/Qualifiers
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   0; Indels
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HTG; HTGS_PHASE1; HTGS_DRAFT; HTGS_ENRICHED.
Rattus norvegicus (Norway rat)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             DB 2;
                                                                                                                                                                                                                                                                 /organism="Rattus norvegicus"
|mol type="genomic DNA"
|do xref="taxon:10116"
|clone="CH230-238KS"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       27.5%; Scor.
100.0%; Pred. No. 1...
0; Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              165317 ACTGTAGGAGTTTCAATTT 165299
                                                                                                                                                                                                                                                                                                                                                                                                             1. .1879
/note="wgs_contig"
4520. .6523
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                /note="wgs_contig"
209074. .210405
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      /note="wgs_contig"
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Query Match
Best Local Similarity 100.0
Matches 19; Conservative
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ACCESSION
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         KEYWORDS
                                           FEATURES
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       ORIGIN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     SOURCE
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Submitted (13-MAY-2003) Human Genome Sequencing Center, Department of Molecular and Human Genetics, Baylor College of Medicine, One Baylor Plaza, Houston, TX 77030, USA

On May 13, 2003 this sequence version replaced gi:22855283.

The sequence in this assembly is a combination of BAC based reads and whole genome shotgun sequencing reads assembled using Atlas (http://www.hgsc.bcm.tmc.edu/projects/rat/). Each contig described in the feature table below represents a scaffold in the Atlas assembly (a 'contig-scaffold'). Within each contig-scaffold, individual sequence contigs are ordered and oriented, and separated by sized gaps filled with Ns to the estimated size. The sequence contigs within a contig-scaffold that consist entirely of whole genome shotgun sequence reads Other and sequences and whole genome shotgun sequence reads. Both end sequences and whole genome shotgun sequence reads. Both end sequences and whole genome shotgun sequence reads. Both will be indicated in the feature
                     Pasternak, S., Pauli, Perez, A., Pfannkoch, C., Plopper, F., Pauli, P., Falls, N., Pauli, P., Pauli, P., Pauli, P., Pauli, P., Pauli, P., Plopper, F., Polndexter, A., Popovic, D., Primus, E., Pul. L. L., Plopper, F., Polndexter, A., Popovic, D., Primus, E., Pul. L. L., Plopper, Rachlin, E., Reeves, K., Redjer, M. A., Reigh, R., Reilly, B., Rachlin, E., Revers, K., Scott, G., Shatsman, S., Shen, H., Sanders, W., Savery, G., Scherer, S., Soctt, G., Shatsman, S., Shen, H., Shetty, J., Shvartsbeyn, A., Sisson, I., Sitter, C.D., Smajs, D., Shedty, J., Shvartsbeyn, A., Sisson, I., Sitter, C.D., Smajs, D., Shedty, J., Shvartsbeyn, A., Sisson, I., Sitter, C.D., Smajs, D., Steinle, M., Strong, R., Sutton, A., Svatek, A., Tabor, P., Taylor, C., Taylor, T., Thomas, M., Thomas, S., Tingey, A., Trejos, Z., Usmani, K., Valas, R., Wallson, M., Waldron, I., Waldron, I., Waldron, I., Waldron, I., Waldron, I., Waldron, I., Waldron, M., Waldron, M., Waldron, M., Waldron, M., Waldro, W., Willsman, G., Wallson, R., Walch, S., Yen, J., Yoon, L., Yoon, V., Vu, F., Zhang, J., Zhou, J., Zhou, X., Zhao, S., Dunn, D., von Niederhausern, M., Waiss, R., Smith, D.R., Holt, R.A., Smith, H.O., Weinstock, G. and Gibbs, R.A.
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* (see http://www.hgsc.bcm.tmc.edu/docs/Genbank_draft_data.html).

* NOTE: This is a "working draft' sequence. It currently

* consists of 2 contigs. The true order of the pieces

* is not known and their order in this sequence record is

* arbitrary. Gaps between the contigs are represented as

* runs of N, but the exact sizes of the gaps are unknown.

* This record will be updated with the finished sequence

* as soon as it is available and the accession number will

* be preserved.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Worley, K.C.
Direct Submission
Submitted (07-NOV-2001) Human Genome Sequencing Center, Department of Molecular and Human Genetics, Baylor Plaza, Houston, TX 77030, USA
3 (bases 1 to 225253)
Rat Genome Sequencing Consortium.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Quality coverage: 6x in Q20 bases; sum-of-contigs estimation
    Parks, K.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Center Cloud name: CH230-175D13
Center Cloud name: CH230-175D13
Assembly program: Atlas 3.0;
Consensus quality: 215069 bases at least Q40
Consensus quality: 217196 bases at least Q20
Consensus quality: 218747 bases at least Q20
Estimated insert size: 230068; sum-of-contigs estimation
Nwaokelemeh, O., Okwuonu, G., Olarnpunsagoon, A., Pal, S.,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    223942: contig of 223942 bp in length 224042: gap of unknown length
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Center code: BCM
Web Bite: http://www.hgsc.bcm.tmc.edu/
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Direct Submission
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                223943
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AUTHORS
TITLE
JOURNAL
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TITLE JOURNAL

AUTHORS TITLE REFERENCE

JOURNAL

COMMENT

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1 (Dasses 1 to 277508)

1 (Dasses 1 to 277508)

2 (Davido, N., Adyagil, A., Ayodeji, M., Baca, E., Baden, H.,

Baldwin, D., Bandaranaike, D., Barber, M., Baca, E., Baden, H.,

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Baldwin, D., Bandaranaike, D., Barber, M., Baca, E.,

Cardenas, V., Carter, R., Carderon, E.,

Chacko, J., Charez, D., Chen, G., Chen, R., Chen, Y., Chen, T., Chen, C.,

Chacko, J., Charez, D., Chen, G., Chen, R., Chen, R., Chen, P., Chacko, J., Charez, D., Chen, G., Chen, R., Chen, R., Chen, R., Chen, R., Chen, R., Chen, J., Levis, L., Liu, J., Liu, J., Liu, M., Martin, K., Martin, K., Martin, R., Mapua, P., Martin, K., Martin, R., Mapua, P., Martin, K., Martin, R., Mapua, P., Martin, K., Martin, K., Martin, K., Pala, K., Pala, K., Pala, K., Pala, K., Pala, 
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Rattus norvegicus clone CH230-unknown, *** SEQUENCING IN PROGRESS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
Mammalia; Eutheria; Rodentia; Sciurognathi; Muridae; Murinae;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Gaps
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Length 225253;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  0; Indels
225253: contig of 1211 bp in length.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  HTG; HTGS_PHASE1; HTGS_DRAFT; HTGS_ENRICHED.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Score 19; DB 2;
Pred. No. 19;
                                                                                                  /organism≈"Rattus norvegicus"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              0; Mismatches
                                                                                                                                  /mol_type="genomic DNA"
/db_xref="taxon:10116"
/clone="CH230-175D13"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Rattus norvegicus (Norway rat)
                                   cocation/Qualifiers
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 126374 GAGTTTCAATTTCAGCAGG 126356
                                                                                                                                                                                                                                     1. .2133
/note="wgs_contig"
221378. .222396
                                                                                                                                                                                                                                                                                                                                     /note="wgs_contig"
222447. .223942
/note="wgs_contig"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     17 GAGTTTCAATTTCAGCAGG 35
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          AC137325.1 GI:25138410
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              27.5%; 8
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Query Match 27.5
Best Local Similarity 100.
Matches 19; Conservative
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   224043
                                                                                                                                                                                                                                                                                                                                                                        misc_feature
                                                                                                                                                                                                                                         misc_feature
                                                                                                                                                                                                                                                                                                            misc_feature
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AC137325/c
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DEFINITION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    ORGANISM
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TITLE JOURNAL REFERENCE

COMMENT

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Query Match
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Lact Submission

Simple Sequencing Consortium.

Direct Submission

Submitted (20-000-2022) Human Genome Sequencing Center, Department of Molecular and Human Genetics, Baylor College of Medicine, One Baylor Plaza, Houston, TX 77030, USA

The Sequence in this assembly is a combination of BAC based reads and whole genome shotgun sequencing reads assembled using Atlas (http://www.hgsc.bcm.tmc.edu/projects/rat/). Each contig described in the fature table below represents a scaffold in the Atlas assembly (a 'contig-scaffold'). Within each contig-scaffold, individual sequence contigs are ordered and oriented, and separated by sized gaps filled with Ns to the estimated size. The sequence may extend beyond the ends of the clone and there may be sequence contigs within a contig-scaffold that consist entirely of whole genome shotgun sequence reads. Both end sequences and whole genome shotgun sequence reads. Both end sequences and whole genome table.
Reilly, B., Reilly, M., Ren, Y., Reuter, M., Richards, S., Riggs, F., Rives, C., Rodkey, T., Rojas, A., Rose, M., Rose, R., Ruiz, S.J., Sandkers, W., Savery, G., Scherer, S., Scott, G., Shasman, S., Shen, H., Shetty, J., Shvartsbeyn, A., Sisson, I., Sitter, C.D., Smajs, D., Sneed, A., Sodergren, E., Song, X.-Z., Sorelle, R., Sosa, J., Steinle, M., Strong, R., Sutton, A., Svatek, A., Tabor, P., Taylor, T. Thomas, N., Thomas, S., Tingey, A., Trejos, Z., Usmani, K., Valas, R., Warren, J., Waldron, L., Walker, B., Wang, J., Wang, Q., Wang, S., Warren, R., Wei, X., White, F., Wailson, R., Wlesen, R., Wei, X., White, F., Waight, R., Wu, C., Yakub, S., Yen, J., Yoon, L., Yoon, V., Yu, F., Zhang, J., Zhou, J., Zhou, X., Zhao, S., Dunn, D., von Niederhausern, A., Weiss, R., Smith, D.R., Holt, R.A., Smith, H.O., Direct Submission
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          NOTE: Bstimated insert size may differ from sequence length (see http://www.hgsc.bcm.tmc.edu/docs/Genbank_draft_data.html). NOTE: This is a "working draft' sequence. It currently consists of 7 contigs. The true order of the pieces is not known and their order in this sequence record is
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 arbitrary. Gaps between the contigs are represented as runs of N, but the exact sizes of the gaps are unknown. This record will be updated with the finished sequence as soon as it is available and the accession number will be preserved.
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2162 bp mRNA linear ROD 12-OCT-2004 Rattus norvegicus SNM1-like, mRNA (cDNA clone MGC:93142 IMAGE:7134940), complete cds.
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Weinstock,K.G. and Bush,D.
Nuclaic acid sequences relating to Candida albicans for diagnostics
and therapeutics
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Strausberg, R. L., Feingold, E. A., Grouse, L. H., Derge, J. G.,
Klausner, R. D., Collins, F. S., Wagner, L., Shemmen, C. M., Schuler, G. D.,
Altschul, S. F., Zeeberg, B., Buetow, K. H., Schaefer, C. F., Bhat, N. K.,
Hopkins, R. F., Jordan, H., Moore, T., Max, S. I., Wang, J., Heiseh, F.,
Stapleton, M., Soares, M. B., Bonaldo, M. F., Casavant, T. L.,
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Eukaryota, Metazoa, Chordata, Craniata, Vertebrata, Euteleostomi,
Mammalia, Eutheria, Rodentia, Sciurognathi, Muridae, Murinae,
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100.0%; Pred. No. 1.5e+02;
tive 0; Mismatches 0;
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                                             'organism="Rattus norvegicus"
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/wol_type="genomic DNA"
                                                                /mol type="genomic DNA"
/db xref="taxon:10116"
/clone="CH230-unknown"
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Location/Qualifiers
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146795. .148635
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77484. .78741
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Matches 18
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Scheetz, T.E., Brownstein, M.J., Usdin, T.B., Toshiyuki, S., Carninci, P., Prange, C., Raha, S.S., Loquellano, N.A., Peters, G.J., Abramson, R.D., Mullahy, S.J., Bosak, S.A., McBarah, P.J., McKernan, K.J., Malek, J.A., Gunarante, P.H., Richards, S., Morley, K.C., Hale, S., Garcia, A.M., Gay, L.J., Hulyk, S.W., Villalon, D.K., Muzny, D.M., Sodergren, E.J., Lu, X., Gibbs, R.A., Fahey, J., Helton, E., Ketteman, M., Madan, A., Rodrigues, S., Sanchez, A., Whiting, M., Madan, A., Young, A.C., Shevchenko, Y., Bouffard, G.G., Blakesley, R.W., Touchman, J.W., Green, E.D., Dickson, M.C., Rodriguez, A.C., Grimwood, J., Schmutz, J., Myers, R.M., Butterfield, Y. S., Krzzwinski, M.I., Skalska, U., Smallus, D.E., Schnerch, A., Schein, J.E., Jones, S.J. and Marra, M.A.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Email: cgapbs-remail.nih.gov
Tissue Procurement: Howard Jacobs
CDNA Library Preparation: Express Genomics
CDNA Library Arrayed by: The I.M.A.G.E. Consortium (LLNL)
DNA Sequencing by: Sequencing Group at the Stanford Human Genome
Center, Stanford University School of Medicine, Stanford, CA 94305
Web site: http://www-sphgc.stanford.ed.
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KEEVVVTLLPAGHCPGSVMFLRQGSNGTVLYTGDFRLAKGEVSRMELLHSGGRVKDIQ
SVYLDTTFCDPRFYQIPSREECLRGVLELVRSWITRSPKHVVMLNCKAAYGYEYLFTN
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KTYVLHTJ EI KESTWWFGRERTRKTNVIVRTGESSYRACFSRHSSYSEITUBLESITUBLESITC
VNAYPNVI PI GLTVDKWDFIKPLCRSSGCAEPKYKDLGKLKGKLKAEDSEDDDLF
DDPLLTHSRRKVPYQVTLHPEVFSMKALPLDQPELGQSPGCCKAESMPSPSLANFVDC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Clone distribution: MGC clone distribution information can be found through the I.M.A.G.E. Consortium/LLNL at: http://image.llnl.gov series: IRAK Plate: 185 Row: m Column: 18 This clone was selected for full length sequencing because it passed the following selection criteria: matched mRNA gi: 22129750.
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'db_xref="RGD:708574"
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PSSIETGGSQSPKRFSDSPKLGSDSDGESTHISSQNSSQSTHITDQGSQGWDSQCDTV
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Dickson, M., Schmutz, J., Grimwood, J., Rodriquez, A., and Myers, R. M.
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Submitted (10-OCT-2004) National Institutes of Health, Mammalian
Gene Collection (MGC), Cancer Genomics Office, National Cancer
Institute, 31 Center Drive, Room 11A03, Bethesda, MD 20892-2590,
                                                                                                                                                                                                                                                                                                                                                                                 human and mouse cDNA sequences
Proc. Natl. Acad. Sci. U.S.A. 99 (26), 16899-16903 (2002)
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TITLE
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COMMENT
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Z18Z DD MRNA linear ROD 31-JUL-2002 Rattus norvegicus SNM1-like protein mRNA, complete cds. AF395746
LLSSQEKSGGDSTSLNKDTYKPKPKDSISASQIEQNALCPQDTHCDLKSGAEVNGVPC
IEBPDTVSGRKSSPEKTSLTSTQADSQSSSDPEIPSTPEAELPKPEHLQFLYGKLATG
ESIVLKKENVHSQIPK"
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PSMKRRLECSLKVFLYCSPVTKELLLTSPKYKFWENRIIAIEIETPTQVSLVDEASGE
KEEVVVTLLPAGHCPGSVMFLFQGSNGTVLYTGDFRLAKGEVSRMELLHSGGRVKDIQ
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LEBELGVQVPHODKLDMRYMDDILHHLTTDRYQIDACRHPKAERYFGMKLPFCGMAS
KTKTVLHTIS IKPSTWMFGBRTTRKTNVI VTFGESSYRACFSFHSSYSEIKDESYIEG
VNAYPNVIPIGLTVDKVMDFLKPLCRSSQCAEPKYKPLGKLKRARTVHLDSBEDDDLF
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DESNSDSEGELETPPSLQGGLGPTTLPQQNADPDVDVPRWEVFFKRKDEITDECLENL
PSSIETGGSQSPKRFSDSPKLGSDSDGESTHISSQNSSQSTHITDQGSQGWDSQCDTV
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IEEPDTVSGRKSSPEKTSLTSTQADSQSSSDPEIPSTPEAELPKPEHLQFLYGKLATG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             1 (bases 1 to 2182)
Li,L., Zhou,Y., Xie,G. and Cowan,M.J.
The mouse and rat SNM1-like genes, cloning, expression and mapping
Unpublished
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Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
Mammalia; Eutheria; Rodentia; Sciurognathi; Muridae; Murinae;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Li, L., Zhou, Y. and Cowan, M.J.
Direct Submission
Submitted (27-JUN-2001) Pediatrics, University of California San
Francisco, 513 Parnassus Avenue, San Francisco, CA 94143, USA
Location/Qualifiers
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Pred. No. 1.4e+02;
0; Mismatches 0; Indels C
                                                                                                                              Score 18; DB 10; Length 2162;
Pred. No. 1.4e+02;
); Mismatches 0; Indels (
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       /product="SNM1-like protein"
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100.0%; Pre
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100.0%;
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/note="SNM1L"
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Best Local Similarity 100.
Matches 18; Conservative
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BB589750 DG11-132a BB632064

BY729142 BB589727 BY734927 BY747058

BB635523 BB634316

CH240 445 t074i24ba AGENCOURT CH240 353 AGENCOURT

Word size :

Searched:

Sequence:

Minimum DB Maximum DB

Database :

222 223 233 233 233 233 233 233 233

Result Š.

2M0247001 BB659504

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Run on:

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Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
Eukaryota; Butheria; Rodentia; Sciurognathi; Muridae; Murinae; Mus.
E 1 (bases 1 to 541)
E 2 to 541)
E 2 to 541)
E 2 to 541
E 2 to 541
E 3 to 541
E 4 (bases 1 to 541)
E 5 to 541
E 6 Jong, P. and Fraser, C.M.
Fussell, D., de Jong, P. and Fraser, C.M.
Mouse BAC End Sequences from Library RPCI-24
U Dipublished (1999)
U Department of Endsayotic Genomics
The Institute for Genomic Research
712 Medical Center Dr., Rockville, MD 20850, USA
Tel: 301 838 0208
Email: sthao@tigr.org
Clones are derived from the mouse BAC library RPCI-24. For BAC
                                                                                                                                                                                                                                                                                                                                                                                                                   EDUJOB/22

RPCI-24-9406.TJB RPCI-24 Mus musculus genomic clone RPCI-24-9406, pathore and a musculus genomic survey sequence.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    library availability, please contact Pieter de Jong (pdejong@mail.cho.org). Clones may be purchased from BACPAC Resources (http://www.chori.org/bacpac/orderingframe.htm). BAC end page: http://www.tigr.org/tdb/bac_ends/mouse/bac_end_intro.html Plate: 94 row: 0 column: 6 Seg primer: SP6 Class: BAC ends.
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/clone_lob="Vector: pTARBAC1; Site_1: BamH1; Site_2: BamH1;
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CN697471
BB630242
BB660218
CCF083776
CA273007
BB659504
CX768923
BB635523
BB635523
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CO681677
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CC570244
CC924394
CK597490
CC510566
CO402870
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BB589727
                                                                                                                                                                   BY734927
BY747058
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    .541
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BB632064
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   Mus musculus
   GSS
   source
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KEYWORDS
SOURCE
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AUTHORS
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(without alignments)
1470.568 Million cell updates/sec
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                GenCore version (c) 1993 - 2005
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                                                                         nucleic search, using sw model
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CE590287
AW311778
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Gapop_60.0 , Gapext 60.0
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69
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995_htc::*;

995_est43:;

995_est65:;

995_9881:;

995_9881:;
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341
385
392
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408
                              Copyright
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Perfect score:
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HindIII; TAMBI Bovine BAC library (Male) produced by Texas
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                                                                                                                                                                                                                                                                                                                                                                                                                                                               /lab.host="ElectroMAX DH10B (Invitrogen)"
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/note="Organ: testis", Vector: pSPORT-1; Site_1: Hind III;
Site_2: ECORI; The cDNA libraries were created with the
Superscript Plasmid System (Invitrogen)."
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
Mammalia; Eutheria; Cetartiodactyla; Ruminantia; Pecora; Bovidae;
Bovinae; Bos.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Lin,S., Najar,F.Z., Adelson,D., Gill,C.A. and Roe,B.A.
Lin,S., Najar,F.Z., Adelson,D., Gill,C.A. and Roe,B.A.
Bovine BAC End Sequences from Library TAMBT
Unpublished (2003)
Contact: Bruce A. Roe
Advanced Center for Genome Technology
University of Oklahoma Department of Chemistry and Biochemistry
Col. Parrington Oval, Room 208, Norman, OK 73019, USA
Tel: 405 325 4912
Fax: 405 325 7762
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             CC905007 855 bp DNA linear GSS 08-AUG-
t018013ba.rl TAMBT Bos taurus genomic clone t018013ba, genomic
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       0; Indels
Unpublished (2004)
Contact: Peter Savolainen
Department of Biotechnology
Royal Institute of Technology, KTH
SE-106 91 Stockholm, SWEDEN
Tel: +46 (0)8 5537 8481
Fax: +46 (0)8 5537 8481
Fmail: Peter.Savolainen@biotech.kth.se
Seq primer: M13 reverse primer.
Location/Qualifiers
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    0; Mismatches
                                                                                                                                                                                                                                                                                                                              organism="Gallus gallus"
                                                                                                                                                                                                                                                                                                                                                      /mol_type="mRNA"
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High quality sequence stop: 501.
Location/Qualifiers
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    20; Conservative
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Bos taurus
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WLB055A10.ab1 WLtestis Gallus gallus cDNA 5', mRNA sequence.
CN233012
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EST analysis of brain and testis cDNA libraries from White leghorn
and Red Jungle Fowl
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Eukaryota; Metazoa, Chordata, Craniata, Vertebrata, Euteleostomi, Archosauria; Aves: Neognathae; Galliformes; Phasianidae; Phasianinae; Gallus.

1 (bases 1 to 718)
Savolainen, P., Fitzsimmons, C.J., Arvestad, L., Andersson, L. and
   BamH1 sites using MboI partially digested male C57BL/6J DNA."
                                                                                                                                                                                                                                                                                                                                                                                                                                          BJ395667 Bictyostelium discoideum cDNA linear EST 08-MAR-20
BJ395667 Dictyostelium discoideum cDNA library, SF Dictyostelium
discoideum cDNA clone dds39p17 5', mRNA sequence.
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/clone_lib="Dictyostelium discoideum cDNA library, SF"
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| forganism="Dictyostelium discoideum"
|mol_type="mRNA"
| ferrain="AX4"
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100.0%; Pred. No. 1.6;
tive 0; Mismatches (
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clone="dds39p17"
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Location/Qualifiers
                                                                                                                                                                                                                                                                     433 TTTCAATTTCAGCAGGGTAT 452
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                                                                                                                                                                                                                                       20 TITCAATITCAGCAGGGTAT 39
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Dictyostelium discoideum
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Gallus gallus
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Khanna, A., Bolla, B., Marra, M., Hillier, L., Kucaba, T., Martin, J.,
Beck, C., Wyle, T., Underwood, K., Steptoe, M., Theising, B., Allen, M.,
Bowers, Y., Person, B., Swaller, T., Gibbons, M., Pape, D., Harvey, N.,
KcCan, K., Watersten, R., Swaller, T., Gibbons, M., Pape, D., Harvey, N.,
McCan, R., Watersten, R., and Wilson, R., Jackson, Y., Cardenas, M.,
Public Soybean EST Project
Unpublished (1999)
Contact: Shoemaker R/Public Soybean EST Project
Public Soybean EST Project
Washington University School of Medicine
4444 Porset Park Parkway, Box 8501, St. Louis, MO 63108, USA
Tel: 314 286 1800
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Email: est@watson.wustl.edu
When it has been determined, an EST from the other end of this clone is listed in the 'Other ESTs on clone' field. This clone is available through: Biogenetic Services, 801 32nd Ave. Brookings, SD 57006 USA (phone: 800 423 4163; email: info@biogeneticservices.com) High quality sequence stop: 201.
                                                                                                                                                                        202 bp mRNA linear EST 21-JUL-2004 sah52902.yl Gm-c1036 Glycine max cDNA clone GENOME SYSTEMS CLONE ID: Gm-c1036-5283 5', mRNA sequence.
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                                                                                                                                                                                                                                                                                                                    Eukaryota; Viridiplantae; Streptophyta; Embryophyta; Tracheophyta; Spermatophyta; Magnoliophyta; eudicotyledons; core eudicots; rosids; eurosids I; Fabales; Fabaceae; Papilionoideae; Phaseoleae;
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                         DB 9; Length 855;
6.1;
                                                        0; Indels
                                                        Mismatches
                         Score 19;
Pred. No.
              27.5%; Scc.
100.0%; Pre
                                                                                                     339 GGAGTTTCAATTTCAGCAG 321
                                                                                     16 GGAGTTTCAATTTCAGCAG 34
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                                                                                                                                                                                                                                                                                     Glycine max (soybean)
Glycine max
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                        Query Match 27.5
Best Local Similarity 100.
Matches 19; Conservative
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DB 4; Length 202;

26.1%; Score 18;

Query Match

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Ligr-gas-dog-17000366482122 Dog Library Canis familiaris genomic, genomic survey sequence.
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Smith, T.P.L., Grosse, W.M., Freking, B.A., Roberts, A.J., Stone, R.T.,
Sadas, E., wray, J.E., White, J., Cho, J., Fahrenkrug, S.C.,
Bennett, G.L., Heaton, M.P., Laggreid, W.W., Rohrer, G.A.,
Chitko-McKown, C.G., Pertea, G., Holt, I., Karamycheva, S., Liang, F.,
                                                                                                                                                                                                                                                                                                                                    Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
Mammalia; Eutheria; Carnivora; Fissipedia; Canidae; Canis.
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Mammalia, Butheria, Cetartiodactyla, Ruminantia, Pecora, Bovidae,
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Rusch,D.B., Delcher,A.L., Pop,M., Wang,W., Fraser,C.M. and
Venter,J.C.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                /clone_lib="Dog Library"
/note="Site_1: BstXI; Libraries were prepared from
peripheral blood"
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Pred. No. 23;
0; Mismatches
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/strain="Standard Poodle"
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5665 MARC 2BOV Bos taurus cDNA 5
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 The Institute for Genomic Re
Department of Eukaryotic Ger
Rockville, MD 20850, USA
Tel: 301-838-0200
Fax: 301-838-0208
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100.0%; Pre
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27
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                           53 ACTGTAGGAGTTTCAATT 36
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  10 ACTGTAGGAGTTTCAATT
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Best Local Similarity 100.
Matches 18; Conservative
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Length 315; 0; Indels

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Fukaryota, Metazoa, Chordata, Craniata, Vertebrata, Euteleostomi, Bukaryota, Metazoa, Chordata, Sciurognathi, Muridae, Murinae, Mus. E (1 Chases 1 to 340)

S Akimura, T., Arakawa, T., Carninci, P., Furuno, M., Hanagaki, T., Hayatsu, N., Hiramoto, K., Hiraoka, T., Hirozane, T., Imotani, K., Ishi, Y., Ito, M., Kawai, J., Kojima, Y., Konno, H., Kouda, M., Mataura, M., Niahi, K., Nomura, K., Numasaki, R., Okazaki, Y., Okido, T., Saito, R., Sakai, C., Sakai, K., Sakaiume, N., Sagabe, Y., Suzuki, H., Tagawa, A., Takahashi, F., Takaku-Akahira, S., Tanaka, T., Tomaru, A., Toya, T., Wataniki, A., Yasunishi, A., Muramatsu, M. and Hayashizaki, Y., Watahiki, A., Yasunishi, A., RIKEN Encyclopedia of Mouse Full-length CDNAS (Akimura, T., et al.)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       BB847064 RIKEN full-length enriched, adult male kidney Mus musculus cDNA clone F530005014 5', mRNA sequence.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Unpublished (2001)
Contact: Yoshihide Hayashizaki
Laboratorry for Genome Exploration Research Group, RIKEN Genomic
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Carninci, P. Shibata,Y., Hayatsu,N., Sugahara,Y., Shibata,K.,
Itoh,M., Konno,H., Okazaki,Y., Muramatsu,M. and Hayashizaki,Y.
Normalization and subtraction of cap-trapper-selected cDNAs to
prepare full-length cDNA libraries for rapid discovery of new
genes. Genome Res. 10 (10), 1617-1630 (2000)
wagi,K., Fujiwake,S., Inoue,K., Togawa,Y., Izawa,M., Ohara,E.,
Watahiki,M., Yoneda,Y., Ishikawa,T., Ozawa,K., Tanaka,T.,
and Hayashizaki,Y.
RIKEN integrated sequence analysis (RISA) system--384-format
v0.980904.e. Vector identified by cross_match with the -minscore and -minmatch 12 options.

PCR PRIMERS
                                                                                                                                                                                                                     1.315
/ organism="Bos taurus"
//organism="Bos taurus"
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/tissue_type="pooled"
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/clone="Vector: pcMV SPORT6; Site_1: Not1; Site_2: Sal1;
Library made from pooled tissue from testis, thymus,
semitendonosus muscle, longissimus muscle, pancreas,
adrenal, and endometrium."
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Query Match 26.1%; Score 18; DB 2; Best Local Similarity 100.0%; Pred. No. 23; Matches 18; Conservative 0; Mismatches
                                                                                                               BACKWARD: GTTTTCCCAGTCACGACG
Plate: 141 row: M column: 5
Seg primer: ATTTAGGTGACACTATAG.
                                                                                                                                                                                                       Location/Qualifiers
                                                                                     FORWARD: AGGAAACAGCTATGACCAT
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                                                                                                                                                                                               USDA, ARS, US Meat Animal Research Center
PO Box 166, Clay Center, NE 68933-0166, USA
Tel: 402 762 4366
Exa: 402 762 4360
Email: smith@email.marc.usda.gov
Single pass sequencing. Bases called and trimmed with phred
vo.9809904.e. Vector identified by cross_match with the -minscore 20
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1 (Dases 1 to 315)
Smith, T.P.L., Grosse, W.M., Freking, B.A., Roberts, A.J., Stone, R.T., Casas, E., Ward, J.E., White, J., Cho, J., Fahrenkrug, S.C., Bennett, G.L., Heaton, W.P., Laegreid, W.W., Rohrer, G.A., Chitko-McKown, C.G., Pertea, G., Holt, I., Karamycheva, S., Liang, F., Quackenbush, J. and Keele, J.W.
Sequence evaluation of four pooled-tissue normalized bovine cDNA libraries and construction of a gene index for cattle
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            /clone lib="MARC 2BOV"
/note="Vector: pCMV SPORT6; Site 1: Not1; Site 2: Sal1;
Library made from pooled tissue From testis, thymus,
semitendomosus muscle, longissimus muscle, pancreas,
adrenal, and endometrium."
                 Sequence evaluation of four pooled-tissue normalized bovine cDNA libraries and construction of a gene index for cattle Genome Res. 11 (4), 626-630 (2001) 21180013
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PO Box 166, Clay Center, NE 68933-0166, USA
Tel: 402 762 4396
Fax: 402 762 4390
Email: smith@email.marc.usda.gov
Single pass sequencing. Bases called and trimmed with phred
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    /organism="Bos taurus"
/mol_type="mRNA"
/db_xref="taxon:9913"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                           BACKWARD: GTTTTCCCAGTCACGACG
Plate: 141 row: M column: 6
Seq primer: ATTTAGGTGACACTARG.
Location/Qualifiers
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/lab_host="DH108"
           Quackenbush, J. and Keele, J.W.
                                                                                                                                                                                                                                                                                                                                                                                                                                                       FORWARD: AGGAAACAGCTATGACCAT
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                                                                                                                                                                           Contact: Smith TPL
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Best Local Similarity
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AW311777
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Query Match
Best Local Similarity 100.0
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El (bases 1 to 340)

Socazaki, Y., Furuno, M., Kasukawa, T., Adachi, J., Bono, H., Kondo, S., Nikaido, I., Osato, N., Saito, R., Suzuki, H., Yamanaka, I., Kiyosawa, H., Yagi, K., Tomaru, Y., Hasegawa, Y., Nogami, A., Schonbach, C., Gojobori, T., Baldarelli, R., Hill, D.P., Bult, C., Hume, D.A., Quackenbush, J., Schriml, L.M., Kanapin, A., Matsuda, H., Batalov, S., Beisel, K.W., Elake, J.A., Bradt, D., Brusic, V., Chobani, L.B., Cousins, S., Dalla, B., Dragani, T.A., Fletcher, C.F., Forrest, A., Frazer, K.S., Gaasterland, T., Gariboldi, M., Gissi, C., Godzik, A., Gough, J., Grimmond, S., Gustincich, S., Hirokawa, N., Jackson, I.J., Jarvis, E.D., Kanai, A., Kurochkin, I.V., Lee, Y., Lehnard, B., Lyons, P.A., Maglott, D.R., Maltais, L., Marchionni, L., McKenzie, L., Miki, H., Nagashima, T., Numata, K., Okido, T., Pavan, W.J., Pertea, G., Pescle, G.,
sequencing pipeline with 384 multicapillary sequencer. Genome Res. . 10 (11), 1757-1771 (2000)
Komno,H., Fukunishi,Y., Shibata,K., Itoh,M., Carninci,P.,
Sugabara,Y. and Hayashizaki,Y.
Computer-based methods for the mouse full-length cDNA
encyclopedia: real-time sequence clustering for construction of a
nonredundant cDNA library. Genome Res. . 11 (2), 281-289 (2001)
Please visit our web site (http://genome.gsc.riken.go.jp) for
further details.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              /clone libe RIKEN full-length enriched, adult male kidney"
/note="Site 1: XhoI; Site 2: SstI; cDNA library was
prepared and sequenced in Mouse Genome Encyclopedia
Project of Genome Exploration Research Group in Riken
Genomic Sciences Center and Genome Science Laboratory in
RIKEN. Division of Experimental Animal Research in Riken
contributed to prepare mouse tissues. 1st strand cDNA was
primed with a primer [5/
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BY306203 RIKEN full-length enriched, 12.5 days embryo Rathke's pouches Mus musculus CDNA clone K920008111 5', mRNA sequence.
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                                                                                                                                                                                                                                                                                                                                               organism="Mus musculus"
                                                                                                                                                                                                                                                                                                                                                                      /mol_type="mRNA"
/db_xref="taxon:10090"
/clone="F530005014"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                            /tissue_type="kidney"
/dev_stage="adult"
/lab_host="SOLR"
                                                                                                                                                                                                                                                                                        Location/Qualifiers
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Mus musculus.
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                                                                                                                                                                                                                                                                                                                                                                                                                                                              sex="male"
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                                                                                                                                                                                                                                                             e mouse tissues.
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BY306203/c
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Petrovsky, N., Pillai, R., Pontius, J.U., Qi, D., Ramachandran, S., Savaai, T., Reed, J.C., Reed, D.J., Reid, J., Ring, B.Z., Ringwald, M., Sandelin, A., Schneider, C., Semple, C.A., Setou, M., Shimada, K., Sultana, R., Takenaka, Y., Taylor, M.S., Teasdale, R.D., Tomita, M., Verardo, R., Wagner, L., Wahlestedt, C., Wang, Y., Watanabe, Y., Walls, C., Wilming, L.G., Wynshaw-Boris, A., Yangsisawa, M., Yang, I., Yang, L., Yuan, Z., Zavolan, M., Zhu, Y., Zimmer, A., Carninci, P., Hayatsu, N., Hirozane-Kishikawa, T., Konno, H., Nakamura, M., Sato, K., Shiraki, T., Waki, K., Kawai, J., Azawa, K., Arakawa, T., Fukuda, S., Hara, A., Hashizume, W., Imotani, K., Ishii, Y., Itoh, M., Kagawa, J., Mayazaki, A., Sakai, K., Sasaki, D., Shinata, K., Shinagawa, A., Yasunishi, A., Yoshino, M., Waterston, R., Lander, E.S., Rogers, J., Birney, E. and Hayashizaki, Y. Analysis of the mouse transcriptome based on functional annotation of 60,770 full-length cDNAs
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Email: genome-readgac.riken.jp, URL:http://genome.gac.riken.jp/
Alzawa,K., Akimura,T., Arakawa,T., Carninci,P., Fukuda,S.,
Hirozanie,T., Indetani,K., Ishli,Y., Itoh,M., Kawai,J., Konno,H.,
Miyazaki,A., Murata,M., Nakamura,M., Nomura,K., Numazaki,R.,
Ohno,M., Sakai,K., Sakazume,N., Sasaki,D., Sato,K., Shibata,K.,
Shiraki,T., Tagani,M., Waki,K., Watahiki,A., Muramatsu,M. and
Hayashizaki,Y. Direct Submission Compute Computational Analysis of Full-Length Mouse CDNAs Compared with
Human Genome Sequences Mamm. Genome. 12, 673-677 (2001)
Normalization and subtraction of cap-trapper-selected cDNAs to
prepare full-length cDNA libraries for rapid discovery of new
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10 (11), 1757-171 (2000)
Computer-based methods for the mouse full-length cDNA
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nonredundant cDNA library. Genome Res. 11 (2), 281-289 (2001)
CDNA library was prepared and sequenced in Mouse Genome
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Davision of Experimental Animal Research in Riken contributed to
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The Institute of Physical and Chemical Research (RIKEN)
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/dev_stage="12.5 days embryo"
/clone_lib="RIKEN full-length enriched, 12.5 days embryo
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Tissues were provided by Michelle Brinkmeier and Sally Camper (Dept. Human Genetics University of Michigan Medical School 4301 MSRB 3 1500 W. Medical Center Dr. Ann Arbor, MI 48109-0638 USA)
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Please visit our web site (http://genome.gsc.riken.go.jp) for
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/clone="K920008111"
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/strain="CD-1"
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Gaps

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Length 340; Indels

26.1%; Score 18; DB 5; 100.0%; Pred. No. 23; 100.0%; Pred.

20 TITCAATITCAGCAGGGT 37

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ACCESSION

VERSION KEYWORDS

ORGANISM

REFERENCE AUTHORS

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Mus muscalus Butearos Chordata, Craniata; Vertebrata; Buteleostomi; Mammalia; Eutheria; Rodentia; Sciurognathi; Muridae; Murinae; Mus. B. 1 (Dasses 1 to 385)

2 Losaes 1 to 385)

3 Losaes 1 to 285)

3 Nazaki, Y., Furuno, M., Kasukawa, T., Adachi, J., Bono, H., Kondo, S., Nikaido, I., Osato, N., Saito, R., Suzuki, H., Yamanaka, I., Kiyosawa, H., Yagi, K., Tomaru, Y., Hasegawa, Y., Nogami, A., Cachobach, C., Gojobori, T., Baldarelli, R., Hill, D.P., Bult, C., Gohobori, T., Baldarelli, R., Hill, D.P., Bult, C., Gorboni, L.B., Cousins, S., Dalla, E., Dragani, T.A., Fletcher, C.F., Forrest, A., Frazer, K.S., Gaasterland, T., Gasiloni, M., Kawasia, Y., Kedzierski, R.M., King, B.L., Konagaya, A., Kawaji, H., Kawasawa, Y., Kedzierski, R.M., King, B.L., Konagaya, A., Kawaji, H., Kawasawa, Y., Kedzierski, R.M., King, B.L., Konagaya, A., Maltais, L., Marchionni, L., McKenaie, L., Mki, H., Nagashima, T., Naratiki, P., Pontius, J.U., Oli, D., Kamachandran, S., Ravasi, T., Pertea, G., Pesole, G., Faronickin, I.V., Dillai, R.P., Pontius, J.U., Oli, D., Kamachandran, S., Sandelin, A., Schneider, C., Reed, J., Randchandran, S., Sandelin, A., Schneider, C., Semple, C.A., Setou, M., Shimada, K., Schneider, C., Milming, L.G., Wynshaw-Boris, A., Yanagisawa, M., Yang, I., Yang, L., Yuan, Y., Zamer, A., Carninci, P., Hayatsu, N., Hirozane-Kishikawa, T., Wanna, Y., Maranbe, Y., Radawa, T., Walinagwa, M., Sato, K., Sato, M., Materston, R., Lander, E.S., Shinagawa, R., Yasuwa, I., Wasawa, I., Wa
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Aizawa,K., Akimura,T., Arakawa,T., Carninci,P., Fukuda,S.,
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The Institute of Physical and Chemical Research (RIKEN)
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Fax: 81-45-503-9216
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Tissues were provided by David A. Hume ( Depts. of Biochemistry and Microbiology/Parasitology Institute for Molecular Bioscience University of Queensland Brisbane, Q 4072 Australia ) whose assistance we gratefully acknowledge.
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BY166908.1 GI:26303554
                                                                                                                                                                   Mus musculus
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     PERSION
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Eukaryota; Metazoa; Chordata; Sciurognathi; Muridae; Murinae; Mus.

1 (bases 1 to 361)
Earlinci.P., Waki,K., Shiraki,T., Konno,H., Shibata,K., Itoh,M.,
Aizawa,K., Arakawa,T., Ishii,Y., Sasaki,D., Bono,H., Kondo,S.,
Sugahara,Y., Saito,R., Osato,N., Fukuda,S., Saro,K., Watahiki,A.,
Hirozane-Kishikawa,T., Nakamura,M., Shibata,Y., Yasunishi,A.,
Kikuchi,N., Yoshiki,A., Kusakabe,M., Gustincich,S., Beisel,K.,
Pavan,W., Aidinis,V., Nakagawara,A., Held,Wah., Iwata,H., Kono,T.,
Nakauchi,H., Iyons,P., Wells,C., Hune,D.A., Fagiolini,M.,
Hensch,T.K., Erinkmeier,M., Camper,S., Hirota,J., Mombaerts,P.,
Muramatsu,M., Okazaki,Y., Kawai,J. and Hayashizaki,Y.
Targeting a complex transcriptome: the construction of the mouse
full-length cDNA encyclopedia
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/clone lib="RIKEN full-length enriched, 17.5 days embryo
whole body"
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BY166908
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Location/Qualifiers
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     162 TTTCAATTTCAGCAGGGT 145
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BY166908/c DEFINITION

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Tsurumi-ku, Yokohama, Kanagawa 230-0045, Japan

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Sokazaki, Y., Furuno, M., Kasukawa, T., Adachi, J., Bono, H., Kondo, S., Nikaido, I., Osato, N., Saito, R., Suzuki, H., Yamanaka, I., Kiyosawa, H., Yagi, K., Tomaru, Y., Hasegawa, Y., Mogami, A., Chonbach, C., Gojobori, T., Baldarelli, R., Hill, D.P., Bult, C., Riyosawa, H., Schriml, L.M., Kanapin, A., Matsuda, H., Batelly, K., Blake, J.A., Bradt, D., Bult, C., Corbani, L.E., Cousins, S., Dalla, E., Dragani, T.A., Glasi, C., Godaik, A., Gough, J., Garimond, S., Gustincich, S., Hirokawa, N., Jackson, I.J., Jarvis, E.D., Kanaja, H., Kawasawa, Y., Kedzierski, R.M., King, B.L., Konagaya, A., Kawaji, H., Kawasawa, Y., Kedzierski, R.M., King, B.L., Konagaya, A., Multais, L., Marchionni, L., McKenzie, L., Mki, H., Nagashima, T., Numata, K., Okido, T., Pavan, W.J., Pertea, G., Pesole, G., Randhandran, S., Ravasi, T., Pontius, J.U., Oki, O., Pertea, G., Pesole, G., Sandelin, A., Schneider, C., Semple, C.A., Setou, M., Shimada, K., Schneider, C., Reed, J.G., Randanahama, R., Taylor, M.S., Yang, L., Yang, L., Yana, L., Yang, L., Yang, L., Yang, L., Yang, L., Yang, L., Yang, L., Watanabe, Y., Wells, C., Wilming, L.G., Wynshaw-Boris, A., Yanagisawa, M., Yang, L., Yang, 
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Laboratory for Genome Exploration Research Group, RIKEN Genomic
Sciences Center(GSC), Yokohama Institute
The Institute of Physical and Chemical Research (RIKEN)
Please visit our web site (http://genome.gsc.riken.go.jp) for
further details.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Gaps
                                                                                                                                                                                                                     /db_xrefe"taxon:10090"
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/cell_type="macrophage"
/cell_type="macrophage"
/clone_lib="RIKEN full-length enriched, bone marrow
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23;
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                                                                                                                                   /organism="Mus musculus"
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                                                       Location/Qualifiers
1. .385
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Mus musculus (house mouse)
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Email: genome-reseggsc.riken.jp, URL:http://genome.gsc.riken.jp/
Aizawa,K., Akimura,T., Arakawa,T., Carninci,P., Fukuda,S.,
Hirozand,Y., Indhi,Y., Itoh,M., Kawai,J., Konno,H.,
Miyazaki,A., Murata,M., Nakamura,M., Nomura,K., Numazaki,R.,
Ohno,M., Sakai,K., Sakazume,N., Sasaki,D., Sato,K., Shibata,K.,
Shizaki,T., Tagami,M., Waki,K., Watahiki,A., Muramatsu,M. and
Hayashizaki,Y. Direct Submission
Computational Analysis of Full-Length Mouse cDNAs Compared with
Human Genome Sequences Mamm. Genome. 12, 673-677 (2001)
Normalization and subtraction of cap-trapper-selected cDNAs to
prepare full-length cDNA libraries for rapid discovery of new
genes. Genome Res. 10 (10), 1617-1630 (2000)
RIKEN integrated sequence analysis (RISA) system-384-format
sequencing pipeline with 384 multicapillary sequencer. Genome Res.
10 (11), 1757-1711 (2000)
Computer-based methods for the mouse full-length cDNA
encyclopedia: real-time sequence clustering for construction of a
nonredundant cDNA library. Genome Res. 11 (2), 281-289 (2001)
CDNA library was prepared and sequenced in Mouse Genome
Encyclopedia Project of Genome Exploration Research Group in Riken
Davision of Experimental Animal Research in Riken contributed to
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
Bukaryota; Metazoa; Chordata; Sciurognathi; Muridae; Murinae; Mus.
1 (bases 1 to 395)
Sokazaki,Y., Furuno,M., Kasukawa,T., Adachi,J., Bono,H., Kondo,S.,
Nikaldo,I., Osato,N., Saito,R., Suzuki,H., Yamanaka,I.,
Kiyoswa,H., Yagi,K., Tomaru,Y., Hasegawa,Y., Nogami,A.,
Schonbach,C., Golobori,T., Baldarelli,R., Hill,D.P., Bult,C.,
Hume,D.A., Quackenbush,J., Schriml,D.M., Kanapin,A., Matsuda,H.,
Batalov,S., Beisel,K.W., Blake,J.A., Bradt,D., Brusic,V.,
Chothia,C., Corbaii,L.E., Cousins,S., Dalla,E., Dragani,T.A.,
Fletcher,C.F., Forrest,A., Frazer,K.S., Gaasterland,T.,
Gariboldi,M., Gissi,C., Godzik,A., Gough,J., Grimmond,S.,
Gustincich,S., Hirokawa,N., Jackson,I.J., Jarvis,E.D., Kanai,A.,
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      /tissue type="whole body"
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              BY158605 RIKEN full-length enriched, bone marrow macrophage Mus musculus cDNA clone 1830018N22 5', mRNA sequence.
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Please visit our web site (http://genome.gsc.riken.go.jp) for
further details.
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red. No. 23;
Mismatches 0
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Matches 18; Conservative
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                               Kurochkin, I.V., Lee, Y., Lenhard, B., Lyons, P.B., Maglott, D.R., Maltais, L., Marchionni, L., McKenzie, L., Miki, H., Nagashima, T., Numata, K., Okido, T., Pavan, W.J., Pertea, G., Pesole, G., Ramachandran, S., Petrovaky, N., Pillai, R., Pontius, J.U., Qi, D., Ramachandran, S., Ravasi, T., Reed, J.C., Reed, D.J., Reid, J., Ring, B.Z., Ringwald, M., Sandelin, A., Schneider, C., Semple, C.A., Setou, M., Shinada, K., Sultana, R., Wagner, L., Wahlestedt, C., Wang, Y., Watanabe, Y., Wells, C., Wilming, L.G., Wynshaw, Boris, A., Yanagisawa, M., Yang, L., Yuan, Z., Zavolan, M., Zhu, Y., Zimmer, A., Carninci, P., Hayatsu, N., Hirozane-Kishikawa, T., Konno, H., Nakamura, M., Sakazume, N., Sato, K., Shiraki, T., Waki, K., Kawai, J., Azawa, K., Arakawa, T., Pukuda, S., Hara, H., Hayatsu, J., Miyazaki, A., Sakai, K., Sasaki, D., Shibata, K., Shinaqawa, A., Ysunishi, A., Ysohino, W., Waterston, R., Lander, E.S., Rogers, J., Barney, E. and Hayashizaki, Y. Rasaki, D., Shibata, K., Rayayasi, O., Birney, E. and Hayashizaki, Y. Analysis of the mouse transcriptome based on functional annotation of 60,700 full-length cDNAs
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Contact: Yoshihide Hayashizaki
Contact: Yoshihide Hayashizaki
Laboratory for Genome Exploration Research Group, RIKEN Genomic
Sciences Center (GSC), Vokohama Institute
The Institute of Physical and Chemical Research (RIKEN)
1-7-22 Suehiro-cho, Tsurumi-ku, Yokohama, Kanagawa 230-0045, Japan
Tel: 81-45-503-922
Fax: 81-45-503-922
Fax: 81-45-503-9216
Email: genome-reseggc.riken.jp, URL:http://genome.gsc.riken.jp/
Hirozanhe.r., Inctani,K., Ishii,Y., Itoh,M., Kawai,J., Konno,H.,
Miyazaki,A., Murata,M., Nakamura,M., Nomura,K., Numazaki,R.,
Ohno,M., Sakai,K., Sakazume,N., Sasaki,D., Sato,K., Shibata,K.,
Shiraki,T., Tagami,M., Waki,K., Watahiki,A., Muramatsu,M. and
Hayashizaki,Y. Direct Submission
Computational Analysis of Full-Length Mouse cDNAs Compared with
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genes. Genome Res. 10 (10), 1617-1630 (2000)
RIKEN integrated sequence analysis (RISA) system-384-format
sequencing pipeline with 384 multicapillary sequencer. Genome Res.
10 (11), 175-1771 (2000)
Computer-based methods for the mouse full-length cDNA
encyclopedia: real-time sequence clustering for construction of a
nonredundant cDNA library. Genome Res. 11 (2), 281-289 (2001)
connucter-based methods for the mouse full-length cDNA
encyclopedia: real-time sequence clustering for construction of a
nonredundant cDNA library. Genome Exploration Research Group in Riken
Genomic Sciences Center and Genome Exploration Research yin RIKEN.
Division of Experimental Animal Research in Riken contributed to
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Tissues were provided by David A. Hume ( Depts. of Biochemistry and Microbiology/Parasitology Institute for Molecular Bioscience University of Queensland Brisbane, Q 4072 Australia ) whose assistance we gratefully acknowledge.
Please visit our web site (http://genome.gsc.riken.go.jp) for further details.
Kawasawa, Y., Kedzierski, R.M., King, B.L., Konagaya, A.
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'tissue_type="bone marrow" 'cell_type="macrophage" 'clone_lib="RIKEN full-length enriched, bone marrow

organism="Mus musculus"

Location/Qualifiers

FEATURES

'db xref="taxon:10090"

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DB 5; Length 395; 23;

Score 18; Pred. No.

26.1%; S 100.0%;

Query Match Best Local Similarity

macrophage"

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                                                                                                                 EST 02-DEC-1996
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Avenida Antonio Carlos 6627, Belo Horizonte, MG, Brazil, 31270-010
                                                                                                                                                                                                                                                                                                                                                                         Rabelo, E.M.L., Franco, G.R., Azevedo, V., Pena, H.B., Santos, T.M., Melra, W.S.F., Rodrigues, N.A., Ortega, J.M. and Pena, S.D.J.. Analysis of EDNA libraries from different developmental stages of Schistosoma mansoni with the aim of producing Expressed Sequence
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              /clone_lib="Schistosoma mansoni, egg stage" site_2: /note="Vector: pBlueScript SK; Site_1: XhoI; Site_2: EcoRI; mRNA was extracted from eggs and the library was constructed and excised according to the manufacturer's
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Ungulished (1996)
Contact: Franco G.R. and Pena S.D.J.
Laboratorio de Genetica-Bioquimica, Departamento de Bioquimicae
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Instituto de Ciencias Biologicas, Universidade Federal de Minas
                                                                                                                                          mansoni
                                                                                                                                                                                                                                                                                                    Eukaryota; Metazoa; Platyhelminthes; Trematoda; Digenea;
Strigeidida; Schistosomatoidea; Schistosoma.
1 (bases 1 to 408)
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                                                                                                                                     MEEG0147.M1F Schistosoma mansoni, egg stage Schistosoma mansc
cDNA clone SME0147 similar to 40S ribosomal protein S7, mRNA
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     instructions (Uni-Zap XR vector, Stratagene)
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                                                                                                                   linear
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      /organism="Schistosoma mansoni"
/mol_type="mtNA"
/strain="NMRI"
                                                                                                                 mRNA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Score 18; DB 1;
Pred. No. 23;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Search completed: November 20, 2005, 09:14:27 Job time : 1805 secs
                                                                                                                   408 bp
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Email: gfranco@mono.icb.ufmg.br
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              /db xref="taxon:6183"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          /dev_stage="egg"
/lab_host="DH5alpha"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Location/Qualifiers
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  /clone="SME0147"
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           310 GTAGGAGTTTCAATTTCA 293
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100.0%;
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                                                                                                                                                                                                                                                                       Schistosoma mansoni
                                                                                                                                                                                                                                                                                           Schistosoma mansoni
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Fax: (5531)4415409
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Matches 18; Conserv
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                                                                                                                                        DEFINITION
                                                                                                                                                                                                                                                                                        ORGANISM
                                                                              RESULT 15
                                                                                                                                                                                                        ACCESSION
                                                                                                                                                                                                                                                                                                                                                         REFERENCE
                                                                                                                                                                                                                                                                                                                                                                             AUTHORS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      JOURNAL
                                                                                               AA140626
                                                                                                                                                                                                                                              KEYWORDS
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The Chart

GenCore version 5.1.6 Copyright (c) 1993 - 2005 Compugen Ltd.

OM nucleic - nucleic search, using sw model

November 20, 2005, 06:45:33 ; Search time 94 Seconds (without alignments) 1201.097 Million cell updates/sec Run on:

US-10-780-250-4 69 Title: Perfect score:

1 gatgctaatactgtaggagt...........ttactggtaatatcactaca 69 Sequence:

Scoring table:

IDENTITY NUC Gapop 10.0 , Gapext 1.0

1202784 segs, 818138359 residues Searched:

Total number of hits satisfying chosen parameters:

2405568

seq length: 0 seq length: 200000000 Minimum DB Maximum DB Post-processing: Minimum Match 0% Maximum Match 100% Listing first 45 summaries

Database :

Issued Patents NA:*

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Pred. No. is the number of results predicted by chance to have a score greater than or equal to the score of the result being printed, and is derived by analysis of the total score distribution.

| | | | de | | | SUMMARIES | |
|---------------|------------|-------|-------|--------|----|----------------------|-------------------|
| Result No. | ult No. | Score | Query | Length | DB | ID | Description |
| υ | - | 31.2 | 45.2 | 807 | 4 | US-09-134-000C-1231 | Sequence 1231, Ap |
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| | 7 | 25.2 | 36.5 | 235452 | 4 | US-09-949-016-13675 | Sequence 13675, A |
| | 8 | 25 | 36.2 | | 4 | US-09-949-016-16191 | 16191, |
| υ | δ | 24.6 | 35.7 | 급 | 4 | US-09-949-016-15051 | Sequence 15051, A |
| O | 10 | 24.6 | 35.7 | 152486 | 4 | US-09-949-016-12869 | |
| υ | 11 | 24.4 | 35.4 | | 4 | US-09-949-016-135426 | |
| υ | 12 | 24.4 | 35.4 | 131332 | 4 | US-09-949-016-15535 | |
| | 13 | 24 | 34.8 | 21080 | 4 | US-09-949-016-15523 | |
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| | 18 | 23.8 | 34.5 | 1197 | 4 | US-09-248-796A-1264 | Sequence 1264, Ap |
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| ပ | 23 | 23.4 | • | 2995 | 4 | US-09-949-016-1886 | |
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| υ | 25 | " | 33.9 | 6865 | 4 | US-09-900-038A-3 | Sequence 3, Appli |
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| υ | 27 | 23.4 | 33.9 | 24263 | 4 | US-09-949-016-12138 | Sequence 12138, A |

| | Sequence 15503, A | Sequence 13733, A | Seguence 2694, Ap | Sequence 203, App | Sequence 6, Appli | Sequence 17978, A | Sequence 199353, | Sequence 91, Appl | Sequence 11758, A | Sequence 17366, A | Sequence 1, Appli | Sequence 1, Appli | Sequence 1351, Ap | Sequence 1890, Ap | Sequence 4295, Ap | Sequence 12, Appl | Sequence 15079, A | Sequence 16206, A | |
|---|---------------------|---------------------|---------------------|--------------------|-------------------|---------------------|----------------------|-------------------|---------------------|---------------------|-------------------|-------------------|--------------------|---------------------|--------------------|-------------------|---------------------|---------------------|--|
| • | US-09-949-016-15503 | US-09-949-016-13733 | US-09-134-000C-2694 | US-09-107-532A-203 | US-09-202-161B-6 | US-09-949-016-17978 | US-09-949-016-199353 | US-09-774-528-91 | US-09-949-016-11758 | US-09-949-016-17366 | US-08-916-421B-1 | US-09-692-570-1 | US-09-710-279-1351 | US-09-134-001C-1890 | US-09-710-279-4295 | US-09-705-299-12 | US-09-949-016-15079 | US-09-949-016-16206 | |
| | 4 | 4 | 4, | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | m | 4 | m | 4 | 4 | |
| 1 | 24317 | 162841 | 876 | 1341 | 1405 | | 601 | 9 | | 32798 | 1664976 | 1664976 | | | | - | 39690 | 54246 | |
| | 33.9 | 33.9 | 33.6 | 33.6 | 33.6 | 33.3 | 33.3 | 33.3 | 33.3 | 33.3 | 33.3 | 33.3 | 33.0 | 33.0 | 33.0 | 33.0 | 33.0 | 33.0 | |
| | 23.4 | 23.4 | 23.2 | 23.2 | 23.2 | 23 | 23 | 23 | 23 | 23 | 23 | 23 | 22.8 | 22.8 | 22.8 | 22.8 | 22.8 | 22.8 | |
| | 28 | 59 | 30 | 31 | 32 | 33 | 34 | 35 | 36 | 37 | 38 | 39 | 40 | 41 | 42 | 43 | 44 | 45 | |
| | U | υ | | | | | | υ | | | | | υ | υ | υ | | O | | |
| | | | | | | | | | | | | | | | | | | | |

ALIGNMENTS

Sequence 1231, Application US/09134000C

Patent No. 6617156

GENERAL INFORMATION:

TITLE OF INVERTION: BUTFENCOCCUS FAECALIS FOR DIAGNOSTICS AND THERAPEUTICS

TITLE OF INVERTION: BUTFENCOCCUS FAECALIS FOR DIAGNOSTICS AND THERAPEUTICS

TITLE PEFERENCE: 032796-032

CURRENT APPLICATION NUMBER: US/09/134,000C

PRIOR FILING DATE: 1998-08-13

PRIOR FILING DATE: 1997-08-15

NUMBER OF SEQ ID NOS: 6812

SEQ ID NO 1231

LENGTH: 807 TYPE: DNA ORGANISM: Enterococcus faecalis US-09-134-000C-1231/c US-09-134-000C-1231

ö Gaps ö Query Match 45.2%; Score 31.2; DB 4; Length 807; Best Local Similarity 66.2%; Pred. No. 0.033; Matches 45; Conservative 0; Mismatches 23; Indels (

2 ATGCTAATACTGTAGGAGTTTCAATTTCAGCAGGGTATCAGAACGGCTTTACTGGTAATA QQ ð

415 TACCTAAA 408 62 TCACTACA 69 ઠે a

US-09-949-016-16509

Sequence 16509, Application US/09949016
Sequence 16509, Application US/09949016
Fatent No. 6812339
GENERAL INFORMATION:
TITLE OF INVENTION: WITH HUMAN DISEASE, METHODS OF DETECTION AND USES THEREOF
TITLE OF INVENTION: WITH HUMAN DISEASE, METHODS OF DETECTION AND USES THEREOF
CURRENT APPLICATION NUMBER: US/09/949,016
CURRENT FILING DATE: 2000-04-14
PRIOR FILING DATE: 2000-10-20
PRIOR PELICATION NUMBER: 60/21,756
PRIOR FILING DATE: 2000-10-03

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COUNTRY:
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Patent No. 681233

GENERAL INCPRARATION:

APPLICAMT: VENTER, J. Craig et al.

APPLICAMT: VENTER, J. Craig et al.

TITLE OF INVENTION: POLYMORPHISMS IN KNOWN GENES ASSOCIATED

TITLE OF INVENTION: WITH HUMAN DISEASE, METHODS OF DETECTION AND USES THEREOF

FILE REFERENCE: CL001307

CURRENT FILING DATE: 2000-04-14

PRIOR APPLICATION NUMBER: 60/241,755

PRIOR PELING DATE: 2000-10-20

PRIOR PLILNG DATE: 2000-10-20

PRIOR FILING DATE: 2000-10-03

PRIOR FILING DATE: 2000-09-08

NUMBER OF SEQ ID NOS: 207012

SOFTWARE: FastSEQ for Windows Version 4.0

SEQ ID NO 12147

LENTH: 767677
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     236794 TCATAGTGTGGGAACTTCATCTTCAGCAGCCACTAAGAAGGACTTGGGCCTGAGTTTCAC 236853
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                                                                                                                                                                                                                                                                                                                                                                                                           3 TGCTAATACTGTAGGAGTTTCCAATTTCAGCAGGGTATCAGAACGGCTTTACTGGTAATAT 62
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                                                                                                                                                                                                                                                                                                              40.0%; Score 27.6; DB 4; Length 174639; 63.6%; Pred. No. 5.1; tive 0; Mismatches 24; Indels 0;
PRIOR FILING DATE: 2000-09-08
NUMBER OF SEQ ID NOS: 207012
SOFTWARE: FastSEQ for Windows Version 4.0
SEQ ID NO 16509
LENGTH: 174639
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      | NAME/KEY: misc_feature
| LOCATION: (1)...(767677)
| OTHER INFORMATION: n = A,T,C or G
US-09-949-016-12147
                                                                                                                                                                                           ; NAME/KEY: misc_feature
; LOCATION: (1)...(174639)
; OTHER INFORMATION: n = A,T,C or G
US-09-949-016-16509
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Best Local Similarity 63.64
Thea 42; Conservative
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                                                                                                                     TYPE: DNA
ORGANISM: Human
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Sequence 17361, Application US/09949016 Patent No. 6812339 GENERAL INFORMATION:

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APPLICANT: VENTER, J. Craig et al.

TITLE OF INVENTION: POLYMORPHISMS IN KNOWN GENES ASSOCIATED

TITLE OF INVENTION: WITH HUMAN DISEASE, METHODS OF DETECTION AND USES THEREOF;
FILE REFERENCE: CL001307

CURRENT APPLICATION NUMBER: US/09/949,016

CURRENT FILING DATE: 2000-04-14

PRIOR APPLICATION NUMBER: 60/241,755

PRIOR PAPLICATION NUMBER: 60/241,755

PRIOR APPLICATION NUMBER: 60/237,768

PRIOR PAPLICATION NUMBER: 60/231,498

PRIOR PLING DATE: 2000-10-03

PRIOR PLING DATE: 2000-09-08

NUMBER OF SEQ ID NOS: 207012

SOFTWARE: PRESENCE for Windows Version 4.0

LENGTH: 767677
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Patent No. 6114605
GENERAL INFORMATION:
APPLICANT: Williamson, Valerie M.
APPLICANT: Kaloshian, Isgouhi
APPLICANT: Rapicobi, Jafar
APPLICANT: Milliam, Isgouhi
APPLICANT: Milliam, Stephen
TITLE OF INVENTION: Procedures and Materials for Conferring
TITLE OF INVENTION: Pest Resistance in Plants
NUMBER OF SEQUENCES: 5
CORRESPONDENCE ADDRESS:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Indels
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          24;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          ADDRESSEE: Townsend and Townsend and Crew LLP STREET: Two Embarcadero Center, Eighth Floor STRY: San Prancisco STATE: California
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Query Match
37.1%; Score 25.6; DE
Best Local Similarity 62.5%; Pred. No. 49;
Matches 40; Conservative 0; Mismatches
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FILING DATE: 09-0CT-1997
CLASSIFICATION: 800
PRIOR APPLICATION DATA:
APPLICATION NUMBER: PCT/US97/18802
FILING DATE: 09-0CT-1997
RICR APPLICATION DATA:
APPLICATION NUMBER: US 60/028,191
FILING DATE: 10-0CT-1996
ATTORNEY/AGENT INFORMATION:
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COMPUTER READABLE FORM:
MEDIUM TYPE: Floppy disk
COMPUTER: IBM PC compatible
OPERATING SYSTEM: PC-DOS/MS-DOS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      NAME/KEY: misc_feature
| LOCATION: (1) ... (767677)
| OTHER INFORMATION: n = A,T,C or G
US-09-949-016-17361
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ORGANISM: Human
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Sequence 112285, Application US/09949016

Patent No. 6812339

GENERAL INFORMATION:

APPLICANT: VENTER, J. Craig et al.

TITLE OF INVENTION: POLYMORPHISMS IN KNOWN GENES ASSOCIATED

TITLE OF INVENTION: WITH HUMAN DISEASE, METHODS OF DETECTION AND USES THEREOF;

FILE REPERENCE: CLOO1307

CURRENT APPLICATION NUMBER: US/09/949,016

CURRENT APPLICATION NUMBER: 60/241,755

PRIOR PAPLICATION NUMBER: 60/241,755

PRIOR APPLICATION NUMBER: 60/231,768

PRIOR PELING DATE: 2000-10-03

PRIOR PILING DATE: 2000-10-03

PRIOR PILING DATE: 2000-09-08
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Patent No. 6812339
GENERAL INFORMATION:
GENERAL INFORMATION:
TITLE OF INVENTION:
TITLE OF INVENTION NUMBER: 60/241,755
PRIOR PELLON NUMBER: 60/241,755
PRIOR PILING DATE: 2000-10-20
PRIOR PELLON UNMBER: 60/237,768
PRIOR FILING DATE: 2000-10-03
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                                                                                                                                                                                                                                                                                                                                                                                                             Length 51952;
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                                                                   023070-070210US
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SOFTWARE: FastSEQ for Windows Version 4.0
SEQ ID NO 11285
LENGTH: 65848
NAME: Bastian, Kevin L.
REGISTRATION NUMBER: 34,774
REFERENCE/DOCKET NUMBER: 0230'
TELECOMMUNICATION INFORMATION:
TELEPHONE: (415) 576-0200
TELEFAX: (415) 576-0300
INFORMATION FOR EASO ID NO: 1:
SEQUENCE CHARACTERISTICS:
LENGTH: 51952 base pairs
TYPE: nucleic acid
TYPE: nucleic acid
                                                                                                                                                                                                                                                                                                 TOPOLOGY: linear MOLECULE TYPE: DNA (genomic)
                                                                                                                                                                                                                                                                                                                                                                                                     Query Match 36.8%;
Best Local Similarity 64.4%;
Matches 38; Conservative (
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Matches 36; Conservative
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US-09-949-016-13675
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ORGANISM: Human
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Sequence 16191, Application US/09949016

Sequence 16191, Application US/09949016

Patent No. 6812339

GENERAL INFORMATION:
TITLE OF INVENTION: POLYMORPHISMS IN KNOWN GENES ASSOCIATED

TITLE OF INVENTION: WITH HUMAN DISEASE, METHODS OF DETECTION AND USES THEREOF

FILE REPERENCE: CL001307

CURRENT APPLICATION NUMBER: US/09/949,016

CURRENT APPLICATION NUMBER: 06/241,755

PRIOR APPLICATION NUMBER: 60/241,755

PRIOR APPLICATION NUMBER: 60/231,498

PRIOR FILING DATE: 2000-10-03

PRIOR PLING DATE: 2000-10-03

PRIOR PLING DATE: 2000-09-08

NUMBER OF SEQ ID NOS: 207012

SEQ ID NOS: 207012

SEQ ID NO 16191
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APPLICANT: VENTER, J. Craig et al.
APPLICANT: VENTER, J. Craig et al.
TITLE OF INVENTION: POLYMORPHISMS IN KNOWN GENES ASSOCIATED
TITLE OF INVENTION: WITH HUMAN DISEASE, METHODS OF DETECTION AND USES THEREOF
FILE REFERENCE: CL001307
CURRENT APPLICATION NUMBER: US/09/949,016
CURRENT FILING DATE: 2000-04-14
PRIOR APPLICATION NUMBER: 60/241,755
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36.2%; Score 25; DB 4
Best Local Similarity 64.9%; Pred. No. 49;
Matches 37; Conservative 0; Mismatches
                                                                                                                                                                                                                                                                                                                                                                                         Query Match
36.5%; Score 25.2; D
Best Local Similarity 62.9%; Pred. No. 47;
Matches 39; Conservative 0; Mismatches
PRIOR APPLICATION NUMBER: 60/231,498
PRIOR FILING DATE: 2000-09-08
NUMBER OF SEQ ID NOS: 207012
SOFTWARE: PastSEQ for Windows Version 4.0
SEQ ID NO 13675
LENGTH: 235452
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; Patent No. 6812339
                                                                                                                                                                                                                                                                                LOCATION: (1). ... (235452)
OTHER INFORMATION: n = A,T,C or G
                                                                                                                                                                                                                                                   NAME/KEY: misc_feature
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US-09-949-016-15051/c
                                                                                                                                                                     TYPE: DNA
ORGANISM: Human
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ORGANISM: Human
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; Sequence 12869, Application US/09949016
; Patent No. 6812339
; GENERAL INFORMATION:
; APPLICANT: VENTER, J. Craig et al.
; TITLE OF INVENTION: POLYMORPHISMS IN KNOWN GENES ASSOCIATED
TITLE OF INVENTION: WITH HUMAN DISEASE, METHODS OF DETECTION AND USES THEREOF;
; FILE REPREMENCE: CLOOD 307
; CURRENT APPLICATION NUMBER: US/09/949,016
; CURRENT FILING DATE: 2000-04-14
; PRIOR PAPLICATION NUMBER: 60/231,768
; PRIOR PILING DATE: 2000-10-20
; PRIOR PILING DATE: 2000-10-03
; PRIOR PILING DATE: 2000-09-08
; NUMBER OF SEQ ID NOS: 207012
; SEQ ID NO 12869
; LENGTH: 152486
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Patent No. 6812339
GENERAL INFORMATION:
APPLICANT: VENTER, J. Craig et al.
TITLE OF INVENTION: POLYMORPHISMS IN KNOWN GENES ASSOCIATED
TITLE OF INVENTION: WITH HUMAN DISEASE, METHODS OF DETECTION AND USES THEREOF
FILE REFERENCE: CL001307
                                                                                                                                                                                                                                                                                                                                                                                                                                                     119365 TGCTAAGATTGCAGGAGGTTTCTAATAAGGAGGTTAACAAAAGGACTGTTATCTTAAAAC 119306
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                                                                                                                                                                                                                                                                                                              35.7%; Score 24.6; DB 4; Length 135667; 61.9%; Pred. No. 66; ive 0; Mismatches 24; Indels 0;
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PRIOR FILING DATE: 2000-10-20
PRIOR APPLICATION NUMBER: 60/237,768
PRIOR FILING DATE: 2000-10-03
PRIOR APPLICATION NUMBER: 60/231,498
PRIOR FILING DATE: 2000-09-08
NUMBER OF SEQ ID NOS: 207012
SOFTWARE: FastSEQ for Windows Version 4.0
SEQ ID NO 15051
                                                                                                                                                                                                                                                                                                            Query Match
Best Local Similarity 61.9
Matches 39; Conservative
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Matches 39; Conserv
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US-09-949-016-135426/c
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US-09-949-016-12869/c
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                                                                                                                                                                                                                  TYPE: DNA
ORGANISM: Human
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; ORGANISM: Human
US-09-949-016-12869
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RESULT 12

US-09-449-016-15335/C

Setent No. 6812339

GENERAL INFORMATION:

APPLICANT: VENTER, J. Craig et al.

TITLE OF INVENTION: POLYMORPHIGMS IN KNOWN GENES ASSOCIATED

TITLE OF INVENTION: WITH HUMAN DISEASE, METHODS OF DETECTION AND USES THEREOF

FILE REPRENCE: CL001307

CURRENT APPLICATION NUMBER: US/09/49,016

PRIOR APPLICATION NUMBER: 60/241,755

PRIOR APPLICATION NUMBER: 60/241,755

PRIOR APPLICATION NUMBER: 60/231,498

PRIOR FILING DATE: 2000-10-20

PRIOR FILING DATE: 2000-10-09

PRIOR FILING DATE: 2000-09-08

NUMBER OF SEQ ID NOS: 207012

SOFTWARE: FastSEQ for Windows Version 4.0

SEQ ID NO 15355
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Patent No. 6812339
GENERAL INFORMATION:
APPLICANT: VENTER, J. Craig et al.
TITLE OF INVENTION: WITH HUMAN DISEASE, METHODS OF DETECTION AND USES THEREOF
TITLE OF INVENTION: WITH HUMAN DISEASE, METHODS OF DETECTION AND USES THEREOF
CURRENT APPLICATION NUMBER: US/09/949,016
CURRENT FILING DATE: 2000-04-14
PRIOR APPLICATION NUMBER: 60/241,755
PRIOR APPLICATION NUMBER: 60/237,768
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                    0; Mismatches
CURRENT APPLICATION NUMBER: US/09/949,016
CURRENT FILING DATE: 2000-04-14
PRIOR APPLICATION NUMBER: 60/241,755
PRIOR FILING DATE: 2000-10-20
PRIOR FILING DATE: 2000-10-03
PRIOR FILING DATE: 2000-10-03
PRIOR APPLICATION NUMBER: 60/231,498
PRIOR PILING DATE: 2000-09-08
NUMBER OF SEQ ID NOS: 207012
SEQ ID NOS: 207012
SEQ ID NOS: 207012
                                                                                                                                                                                                                                                                                                                                                                                                                 35.4%; Score 24.4; 173.8%; Pred. No. 12;
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Best Local Similarity 73.8<sup>1</sup>
Matches 31; Conservative
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Best Local Similarity
Matches 31; Conserv
                                                                                                                                                                                                                                                                                                                                       ; ORGANISM: Human
US-09-949-016-135426
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ORGANISM: Human
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Patent No. 6703491
GENERAL INFORMATION:
APPLICANT: Homburst et al.
APPLICANT: Homburst et al.
TITLE OF INVENTION: Nucleic acids and proteins of Drosophila melanogaster
FILE REFERENCE: File Reference: 7326-094
CURRENT PAPLICANTION NUMBER: US/09/270,767
CURRENT FILING DAIE: 1999-03-17
NUMBER OF SEQ ID NOS: 62517
SOFTWARE: Patentin Ver. 2.0
SEQ ID NO 831
LENGTH: 537
TYPE: DNA
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                                                                                                                                                                                                                     Gaps
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                                                                                                                                                                               34.8%; Score 24; DB 4; Length 21080; 64.3%; Pred. No. 59; ive 0; Mismatches 20; Indels
PRIOR FILING DATE: 2000-10-03
PRIOR APPLICATION NUMBER: 60/231,498
PRIOR FILING DATE: 2000-09-08
NUMBER OF SEQ ID NOS: 207012
SOFTWARE: FastSEQ for Windows Version 4.0
SEQ ID NO 15523
LENGTH: 21080
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            ; LOCATION: (1) ... (117080)
; OTHER INFORMATION: n = A,T,C or G
US-09-949-016-12627
                                                                                                                                                                              Query Match
Best Local Similarity 64.39
Matches 36; Conservative
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Matches 36; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  NAME/KEY: misc_feature
                                                                                                                ; TYPE: DNA
; ORGANISM: Human
US-09-949-016-15523
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ORGANISM: Human
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US-09-270-767-831/c
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US-09-949-016-12627
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                                                                                                                                        2 ATGCTAATACTGTAGGAGTTTCAATTTCAGCAGGGTATCAGAACGGCTTTACTGGTAATA 61
                                                                                                   Gaps
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                                                              DB 4; Length 537;
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                                                         Query Match
34.5%; Score 23.8; Di
Best Local Similarity 59.7%; Pred. No. 20;
Matches 40; Conservative 0; Mismatches
; ORGANISM: Drosophila melanogaster
US-09-270-767-831
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